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Krauss - Tobacco Mysteries Expose

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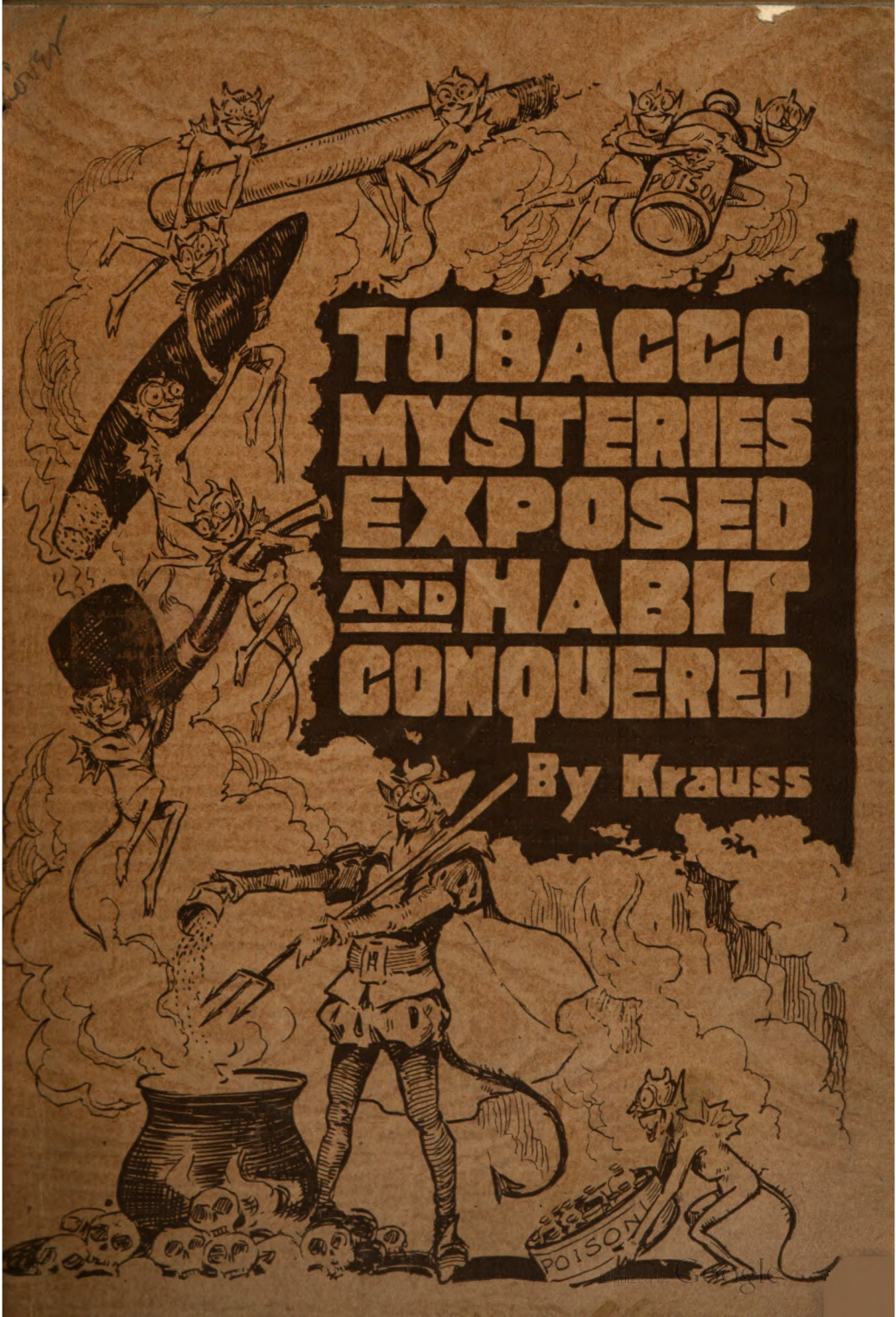
POISON
TOBACCO
MYSTERIES
EXPOSED
AND HABIT
CONQUERED
By Krauss
POISON

RECENT PRESS COMMENTS

Mr. Krauss is the aggressive type of Rev. Billy Sunday. His method is of the aggressive, sledge hammer, argumentative manner and he calls a spade a spade. For over two hours the speaker held a big audience and was frequently interrupted with applause.—The Erie Evening Herald, Erie, Pa., July 25, 1914.

Mr. Krauss bears a reputation as being the only rival of the renowned Billy Sunday. Unlike the energetic minister o ithe Gospel, he does not specialize on one subject.—Paterson Evening News, Paterson, N. J., August 18, 1914.

Mr. Krauss's lectures on "White Slavery" here were heard by thousands of people in the church and in the open air meetings. He has the support of the reform leaders of Kalamazoo.—Kalamazoo Telegraph Press, Kalamazoo, Mich., May 25, 1914.

Mr. Krauss's lecture on "White Slavery" is not the kind that is repulsive, and it is one which all persons may listen to without becoming embarrassed at the remarks made.—Jackson Citizens' Press, Jackson, Mich., May 15, 1914.

His forceful peroration of the evils of White Slavery made a decided impression on his audience, which he held spellbound.—The South Bend News-Times, South Bend, Ind., June 15, 1914.

Mr. Krauss is an unusually daring orator and bitterly attacks the evils and their causes. He certainly was able to impress his hearers with the dangers confronting them.—The Rockford Republic, Rockford, Ill., June 19, 1914.

Mr. Krauss has acquired a national reputation as a relentless enemy of White Slavery. He is a unique worker in his line, dealing body blows at the White Slave traffic.—Rockford Daily Register-Gazette, Rockford, Ill., June 19, 1914.

Through his fearless and tireless work in suppressing the social evil, Mr. Krauss has earned the enthusiastic support and praise of clergymen and prominent laymen throughout the country. Mr. Krauss is an energetic worker, and wherever he has spoken he has impressed his audiences. —The Brooklyn Daily Times, Brooklyn, N. Y.

New York man, reconstructor of ideas, is speaking plainly on vital things.—Democrat-Chronicle, Rochester, N. Y., July 26, 1916.

Dr. Krauss delivered a broadside at cigarette smokers and tobacco chewers at noon, his audience being employees of The Inetrnational Harvester Company.—Auburn Advertiser-Journal, July 24, 1916.

Dr. Krauss discusses morals, hygiene, sociology, white slavery and humanity all in a manner which is understood with ease by all his auditors.—Evening Enterprise, Poughkeepsie, N. Y., June 3, 1916.

Dr. Krauss is an earnest speaker, full of his subject, and has left in his train a long list of lives saved, girls rescued, boys started anew. He has awakened parents to their real responsibility.—The Hudson Republican, Hudson, N. Y., June 5, 1916.

Dr. Krauss has a delicate subject, yet he handles it carefully and deliberately drives home the truths which are generally admitted. He talked from the bandstand inside the General Electric Works for twenty minutes to over 3,500 employees, and was highly complimented.—Schenectady Gazette, Schenectady, N. Y., June 14 ,1916.

Dr. Krauss is a picturesque lecturer of the "Billy Sunday type."—Newburg Daily News, July 1, 1916.

Dr. Krauss's entire address was delivered with great severity. For over two hours he spoke to thousands of people in a most powerful and convincing manner, bearing the strongest warning to the young youth of the nation on present-day evils.—Utica Daily Press, Utica, N. Y., July 11, 1916.

Dr. Krauss talks in a manner that all may understand, and he brings out truths and facts that leave a deep impression on the people who hear him.—Herald-Despatch, Utica N. Y., July 11, 1916.

Dr. Krauss's efforts had splendid results in Utica, and he has been widely praised by local people.—Utica Press, July 15, 1916.

Dr. Krauss, emphasizing every sentence in tone, manner and gesture, succeeded last evening in holding the attention of his audience for over two hours. He is bold in his assertions. He hammered facts repeatedly to prove his assertions.—Utica Sunday Tribune, July 16, 1916.

Dr. Krauss who, a la Billy Sunday, hands it out straight from the shoulder on morals.—Syracuse Journal, July 17, 1916.

Dr. Krauss is a great worker. He spoke before a large audience, who applauded at times while the speaker stormed against the forces of immorality, cigarette smoking and drink.—Auburn Citizen, July 25, 1916.

Dr. Krauss spoke for three hours and three-quarters on more knowledge, not money, will stop girls from going wrong.—Rochester Herald, July 29, 1916.

Dr. Krauss has the backing of many influential people in the United States.—Evening Times, Rochester, N. Y., July 25, 1916.

WHAT PROMINENT AUTHORS AND WRITERS HAVE SAID REGARDING PLAIN TEACHING

Awaken girls' brains and let hearts rest.—Dorothy Dix.

Girls must know the big facts of life.—Mrs. William Grant Brown.

Tell children secrets of life.—Elizabeth Hamilton-Muncie, M. D., Ph. M.

Warn the boys as well as the girls.—Margaret Hannis.

Silence of parents is criminal. The fate of Marian Lambert is a fresh warning to mothers to impart to their daughters the knowledge that will enable them to avoid the pitfalls of youth.

You can't make a home-worker out of a girl in a boys' school.—Amelia Barr.

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BETA-PYRIDIL-ALPHA-N-METHYL-PYRROLIDINE
(NICOTINE)

TOBACCO MYSTERIES EXPOSED AND HABIT CONQUERED

BY

DR. LOUIS L. KRAUSS

AUTHOR OF

HUMANITY, FATHER AND SON, MOTHER AND DAUGHTER, THE SILENT WORKER, THY MOTHER, A THOUSAND TRUTHS.

PUBLISHED BY

THE BUREAU OF MORAL AND HYGIENIC EDUCATION

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"He who shows men how to keep well will be the greatest benefactor to the race, while he who shows all how to get well is next."

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Dr. LOUIS L. KRAUSS

Lecturer, Author, Writer. President and Founder of the Bureau of Moral and Hygenic Education, Inc., of New York.

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INTRODUCTION

The purpose of the writer of this book is to explain in the simplest words and manner all about tobacco, having wide experience in all branches of the tobacco industry.

My first experience was when a mere boy, thirty years ago, I loved farm work and worked on a tobacco farm or plantation, doing chores, woodcutting, setting wood piles on fire, distributing ash and seed, watering, hoeing, weeding, transplanting, priming, topping, suckering, stringing, tieing and baling.

I was employed by a cigar manufacturer in Park Place, New York City. My duties made me thoroughly familiar with the various branches of the tobacco industry, first flavoring (blending) then sweating, stripping, sorting, drying and distributing tobacco to the cigar maker. After a short time I left to take up with another firm in Burling Slip, New York City, where I worked as packer and sorter, also labeling and stamping cigar boxes. After one year, I secured employment with a large firm of cigar makers at the foot of East 52nd Street, New York City. There I was employed to run a new cigar making (bunch) machine which the firm was interested in. In this factory I worked in every branch of the cigar and cigarette line until the firm went out of business, some other firm took over the building and cigarettes were made there. When the Spanish-American war broke out in 1898 I enlisted in Company G. of the 9th N. Y. Vol., Inft., and served until the close of the War. I have worked as a retail salesman for the big tobacco corporation in three stores in New York City.

From the time I was discharged from service in the Army I have devoted my time to writing, traveling and lecturing, having visited nearly all the principal cities, villages and towns in the United States and Canada, my topics being Tobacco, Cigarettes, Vice, White Slavery and Intemperance. I have lectured in colleges, schools, factories, health resorts, and held thousands of open air meetings, talked to cigarette, cigar and pipe smokers and chewers of tobacco, also to those who worked in the tobacco industry. I am indebted to many for the information thus gathered, and to the authors of the verses quoted, knowing that no objec-

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tions would be offered, they knowing that this book is another part of the ammunition in the great battle for a cleaner and better generation.

I would express my sense of obligation, not only to those able writers on the subject from whom I have gathered much of my material, but also to various medical authorities—strangers as well as friends—to whose courtesy in response to inquiries I have been indebted in the performance of my work for my information.

I am chiefly indebted to the following authors:

Henry Ford, "The Case against the Little White Slaver."
M. Lander, "The Tobacco Problem."
Marx Mac Levy, "The Tobacco Habit Easily Conquered."
Azur Thurston, "Cigarettes and their Analysis."
Thomas S. Blair, M. D., "Public Hygiene."
Rudolph J. Bodmer, "The Book of Wonders."
Milton Whitney, "Chief of the Division of Soil, United States Department of Agriculture."
Henry P. Prescott, F. L. S., "Strong Drink and Tobacco Smoke."
Jacob Gutman, Phar. D., M. D.
Gilbert Burnette, F. LL.
William Marsden, M. D.
H. H. Tidswell, M. D.

DR. L. L. KRAUSS

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DISCOVERY, NAME AND TRANSPLANTATION OF THE CURSE

"Tobago," was the name of a "Y" shaped Indian pipe that usually consisted of a hollow forked reed, the two prongs of which were fitted into the nostrills, the smoke being drawn from tobacco placed in the end of the stem, that is where the word t-o-b-a-c-c-o is derived.

Tobago also was the name of an island and it was first believed that that is where we got the name of tobacco.

It was Christopher Columbus who gave it the name, owing to its resemblance of the shape of the Indian pipe.

Tobacco is now found growing in almost all inhabited countries, but it is a native of the Americas and the adjacent islands. So Columbus besides discovering America was the real discoverer of tobacco in 1492, when he found the native Indians using a weed, upon his first visit to the New World.

Extensive investigations have established that tobacco smoking was first a religious rite, which gradually became a social habit among the natives. Columbus and his successors some years afterward carried the plant back to Spain and a Spanish Monk also indentified the weed in a province of San Domingo and called it Tobacco. Sir Walter Raleigh took the weed to England and Jean Nicot introduced it to the French, and from thence the name Nicotine was introduced.

Adventurous traders brought some seed to Turkey and other places, when some Spanish Argosies traveled with seeds westward from Mexico to the Philippine Islands; and again to China and Japan and now four centuries after its discovery tobacco is being cultivated in nearly every country and being used by every race of men.

Milton Whitney in his bulletin of the Division of Soils issued by the United States Department of Agriculture, says: Tobacco while a native of the Americas can be grown in nearly all parts of the globe, even where wheat and corn cannot economically grow. The plant readily adapts itself to a great range of climatic conditions, will grow on nearly all kinds of soil and has a comparatively short season of growth. But while it can be so universally grown, the flavor and quality of the leaf are greatly influenced by conditions of climate and soil. The industry has been very highly specialized and there is only one demand for tobacco possessing certain qualities adapted to certain specific purposes. It is a curious and interesting fact that tobacco

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suitable for our domestic cigars is raised in Sumatra, Cuba and Florida, and then passing over our middle tobacco states the cigar type is found again in Ohio, Pennsylvania, Massachusetts, Wisconsin and Connecticut.

It is surprising to find little difference in the metrological record for these several places during the crop season. There does not seem to be sufficient difference to explain the different classes of tobacco and yet this difference is probably founded upon metrological conditions. The plant is far more sensitive to these metrological conditions than are our instruments. Even in such a famous tobacco region as Cuba, tobacco of good quality cannot be grown in the immediate vicinity of the ocean or in certain parts of the island that would otherwise be considered good tobacco lands. This has been experienced also in Sumatra and in our own country, but the influences are too subtle to be detected by our metrological instruments. Under good climate conditions, the class and type of tobacco depends upon the character of the soil, especially on the physical character of the soil upon which it is grown, while the grade is dependant largely upon the cultivation and curing of the crop. Different types of tobacco are grown on widely different soils all the way from coarse sandy lands of the Pine Barrens, to the heavy clay limestone corn and wheat lands.

The best soil for one kind of tobacco, therefore may be almost worthless for the staple agricultural crops, while the best for another type of tobacco may be the richest and most productive soil of any that we have.

Havana tobacco, which means all tobacco grown on the island of Cuba, possesses peculiar qualities which make it the finest tobacco in the world for cigar purposes. The island produces from 350,000 to 500,000 bales annually of which 150,000 to 250,000 bales come to the United States for use in American Cigar factories. The best quality of the Cuban tobacco comes largely from the Vuelta Abajo section although some very choice tobaccos are raised also in the Partidos section.

Remedios tobaccos are more heavily bodied than others and are used almost exclusively for blending with other tobacco. While there are innumerable sub-classifications, such as Semi-Vueltas, Remates, Tumbadero, etc., the three general divisions named above, Vuelta Abajo, Partidos, and Remedios, embrace the entire island. If a fourth general classification were to be added it would be Semi-Vueltas.

The Vuelta Abajo is grown in the Province of Pinar del Rio, located at the western end of the island. It is raised practically throughout the entire Province.

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Semi-Vueltas are also grown in Pinar del Rio, but the trade draws a line between them and the genuine Vueltas. Partidos tobacco which is grown principally in the Province of Havana differs from the Vuelta Abajo in that it is of a lighter quality.

The Partidos country is famous for its production of fine light, glossy wrappers. Tobacco from the foregoing sections is used practically in the manufacture of clear Havana cigars. Some of the heavier Vueltas, however, are also used for seed and Havana cigar purposes.

Remedios, otherwise known as Vuelta-Arriba, is grown in the Province of Santa Clara, located in the centre of the island.

This tobacco is taken almost entirely by the United States and Europe and is used for filler purposes, principally in seed Havana and cigars. Its general characteristics are a high flavor and rather heavy body, which make it especially suitable for blending with our domestic tobaccos.

Havana tobacco is packed and marketed in bales.

How Tobacco Is Planted

Low, rich, hardwood lands are first selected, which must be prepared by cutting down the trees by experienced lumbermen (lumberjacks). The trees are cut up and piled in cords and left to dry, and about the latter part of January or early in February these cords are stacked around skid-poles, the same shape as cones and then ignited, thus clearing the ground by the burning process, then the wood coals are moved from place to place until the ground is cleared of grass, brush, and insects are exterminated. The ground is then plowed up and the ashes plowed under, thus making a perfect seed bed. Extra dry ashes is then mixed with seed, a teaspoonful of seed to a gallon of ashes, the mixture is then sowed over a square rod of land, which is cultivated to supply plants enough for one acre.

After this operation the ground is covered with cheese cloth as a protection after which they are watered, until they obtain the height of about four inches when they are carefully weeded, they are then transplanted early in April. Then the real fertilizing of the soil takes place, cow manure is distributed, ten to twenty double loads to the acre, and to this natural fertilizer is added two hundred and fifty pounds of *carbonate of potash* and three hundred pounds of bright cotton seed meal is sprinkled and plowed under at a cost of about $120 per acre to enrich the soil.

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The land is thereupon laid out into ridges or furrows four feet apart each way and then flattened so as to level the bed for the small plant, then at a mark at eighteen inch intervals, a small hole is made into which is poured about a quart of water. It is in this hole the young plant is set and allowed to begin its full growth.

Planting usually ends about the early part of June, and the plants are carefully watched, they should be howed, cultivated and watered at least once a week to be good. Care must be exercised to see that butter worms do not infest the plants, because there is a small green moth that lays its eggs upon the bud which turn into worms in two days. A mixture of *insecticide* and cornmeal is sprayed upon the plant at intervals to protect it until the bud of the plant is fully grown, then the chief danger is past.

About the time the tobacco plant is some three feet high many of the first leaves of the plant are plucked and discarded. When the crop advances to this stage of growth there comes another enemy to be looked after, known to the planter as the horn-worm.

The horn-worm is a mouse-colored moth of medium size. They come in by the thousands about sun-down and swarm over the tobacco field depositing their green egg about the size of a pinhead upon the under side of the plant leaf. Unless carefully watched these insects will destroy this whole leaf of tobacco and leave nothing but the stub or stems and stalk. Special picking or insecticides are used to overcome this danger.

In about two or three months from the time of setting the plants for growth, the first leaves to ripen are the lower ones which are picked by the grower or primer, who detaches each leaf and carefully inspects it to see that no nests of insects are attached so as not to carry insects to the barn. Now the plants begin to bud at the top which is a sign that the topper shall begin by breaking off the bud and small leaves at the top so as to confine the development of the plant to the leaves on the bottom. Within about three weeks the priming of the tobacco is done, and all the marketable leaves upon the top of the plant are harvested. Then all the small branches that have a tendency to grow upon the main stalk are carefully removed, this is called *suckering*. The *stringers* are next in line to do their part, which is to run a needle and a strong twine through the stem keeping each leaf of tobacco about one inch apart, twenty-five or thirty to a string, according to the width of the poles set up. This is done to prevent the leaves touching each other so as not to impair the cure of the leaf. There are several of

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the strings of leaves put up one above the other and every available inch of space is used by the stringers, so this is the first cure the tobacco leaf undergoes, it is called the barn cure. At this stage of the proceedings the grower must also be very careful about weather conditions and changes, to see that proper ventilation is maintained in order to avoid stem-rot.

The next process is tieing the leaves into hands of tobacco with a string, and packing for delivery to the fermenting house for the bulk sweat. This is done by making piles of equal height and covered with cloths or blankets which are quite frequently turned so that the leaves shall cure or sweat evenly, and to keep as light a color as *possible.* The longer the sweat the darker the leaves. When this process is completed the blankets are removed, the leaves or hands are placed upon sorting tables, sorted into sizes, lengths and colors and afterwards sent to the packers who pack the grades in bales or boxes, marking each bale or box with the growers mark and is then weighed and stored awaiting shipment to the factory where it is handled many times before it is made up into cigars, cheroots, cigarettes, plugs, fine cut chewing and smoking tobacco.

If you have travelled through regions where tobacco is grown you remember seeing the little tents which are erected over the tobacco plants and which give the plantation the appearance of miniature military encampments. The purpose of these tents is to give the plants the shade necessary to help protect them from the mosaic disease.

It is the most dread of the ailments to which tobacco is subject, it either destroys the plants before they reach maturity or seriously damages them for smoking purposes. The bad taste that makes some cigars so unpleasant is often due to the fact that they were made from tobacco which had been suffering from the mosaic disease.

It has been discovered that the color of these tents has a very curious effect upon the progress of the mosaic disease. Plants suffering from the disease are greatly benefitted by being kept under blue tents.

When kept under red tents the severity of the disease is considerably lessened and when kept under tents whose neutral shades only suffuse the sun's rays its progress is checked somewhat.

To test the effects of colored light the plants were enclosed in cloth hoods of the desired color, the apparently healthy leaves remaining uncovered and exposed to normal daylight. After a month the hoods were removed and the plants carefully examined for visible symptoms of the disease.

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Although the plants kept in blue light showed no symptoms of the disease for at least two weeks after the removal of the hoods, it cannot be said that they were completely cured. The juice of their leaves still remained highly infectious, and when healthy plants were inoculated with it they promptly developed the disease.

Tobacco and Other Leaves

If the reader has mastered the details of the foregoing chapter, he will find what follows of some use, should he care to analyze for himself the tobacco which he smokes or crews or the snuff which he uses. Some of the tobacco leaves, imported into the United States arrives packed in bales, cases and large hogsheads in which, after packing they are submitted to an enormous pressure. They rarely suffer any injury in this process, and for purposes of microscopic analysis are after steeping in water, nearly as useful as if green and freshly packed. Comparing the margins of any tobacco leaves with those of other plants we shall find them *entire*—that is, even and unbroken unlike the borders of the leaves cut into toothed notches, or rounded segments, or into lorger segments like the dandelion leaf.

American, German, Dutch and most tobacco leaves of commerce are without stalks being attached to the stem of the plant by the midrib, or large central vein; and this is a very marked character which they possess.

Therefore, if we find in our cigar a portion of a leaf, either possessing a stalk or a divided margin, we may safely conclude that we had alighted upon an adulteration.

Moreover the midrib of tobacco in section presents a horse-shoe form in which the *woody* or *fibrous* tissue lies as a central mass, surrounded by a cellular tissue. In the latter character it closely resembles *foxglove*, but the last differs from it in the woody tissue being curved upwards at the ends, and margin of the section, more particularly on its upper surface, having strong decided curves.

In all the leaves with which tobacco is or is likely to be adulterated, the woody tissues of their midribs or stalks lie in separate detached bundles as will be readily seen on comparison.

The forms of the leaves are *dock*, *burdock*, *chicory*, *foxglove*, and *comfrey* with the transverse vertical sections of their midribs, are given because of the peculiar characters of the leaves, will be evident on inspection; those of the sections of the midribs consisting of differences

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in the forms of their outlines, whether plain, more or less grooved or lobed, and the general form of distribution of the woody tissues of each amongst the cellular tissue.

Compare, for instance, the forms of the leaves of *burdock* and *dock* or either of these again with *comfrey* and all three with tobacco leaf. Observe the forms of their bases, points and margins, and characteristic distinctions will be immediately apparent.

Take a portion of the midrib of each leaf, and cut a very thin slice of it at a right angle to its length and compare them with each other under microscope with an object glass of low power. The difference of these will be seen in the general forms of their outlines whether plain or grooved, or lobed, and the shape and distribution of the woody amongst the cellular tissues. Notice more carefully the general outlines and upper surfaces of the midrib section of *dock* and *burdock* and the marked characters which distinguished them from tobacco or *comfrey*. Those of *chicory* and *foxglove* are as decidedly marked. Carrying our analysis still further, by adding greater power to the microscope, our leaves furnish us with valuable and infallible evidence in the minute hairs with which their surfaces are clothed, and which form their delicacy and pliability, eluding the grinding action of the snuff-mill.

These hairs are attached to and grow on the skins of the upper and under surfaces of leaves, their midribs and veins, lying scattered in greater or less abundance amongst the *stomates* or breathing pores of these plants.

The tobacco leaf is furnished with two forms of hairs, long and short. The former are composed of three or four elongated cells, joined end to end, the whole surmounted by a cluster of minute cells forming a gland which contains a *rich brown coloring matter*. These are called grandular hairs, and they have a pair, sometimes more cells forming a compound base. The short hairs are unicellular, with a cluster of cells at one end containing coloring matter. I call these hairs club-shaped; their bases are simple.

The leaves of the *dock* are furnished with peculiar club-shaped unicellular hairs, free from coloring matter but having their surfaces marked with a peculiar wavy line (striated) formed by wrinkling as it were of their cell walls. This is a very marked feature, equally so is the presence on the skin of the blade, or thin portion of the leaf, of numerous circular cavities, composed of clusters of cells built into the substance of the leaf forming minute chambers containing crystals of

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oxalate of lime (raphides). The hairs described are found mostly on the midribs and veins of leaves, and glands on the leaf-blades.

Leaves of the *burdock* plant are covered on their under surface with a dense, greenish-white, wooly substance. When a minute portion of the skin to which this attached is separated from the leaf, this wooliness is resolved by the microscope into a mass of very beautiful transparent hairs, each composed of a string or bead, of square-shaped cells, jointed together; these gradually diminish in size towards the end of the hair, which terminates in a slender, transparent filament of very great length. The bases of these hairs are compound.

The leaves of the *chicory* plant have a peculiar interest in connection with the subject of tobacco adulteration. Some years ago tons of these leaves steeped in tar oil were seized in Europe by the revenue officers on the premises of a cigar manufacturer, by whom they had been freely used as "filler" for Havanas and so good was the sophistication, that many practical men were actually deceived. When the leaves were unrolled their margins at once told the tale, and when their skins were stripped and examined under the microscope they told another, for attached to them were discovered an abundance of minute hairs as unlike those of the tobacco leaf as could be well imagined for about a third of its length, each hair composed of a number of oblong cells, laid side to side, and end to end; these gradually lessen in number until they form a row of single cells joined together, the hair being furnished by a single cell curiously curved. A cluster of cells form a compound base to each hair. Duboisia Hopwoodii another nicotine bearing plant is found in the interior of Australia. This is all given so that my readers may understand why adulterations of tobacco are so often reported.

Nicotine Poisoning—U. S. Government Experiment

Nioctie is a nerve-soother. It is a habit forming drug, and when used to excess acts as a poison. Nicotine is an alkaloid peculiar to the tobacco plant. It is what makes tobacco leaves different from other leaves. In a strong cigar there is three per cent. of nicotine; in a mild cigar less than two per cent; in a cigarette from one-half in ten to almost four per cent. as is hereafter given in the tables of analysis. It is nicotine that gives tobacco its stimulating effect.

The United States Government spent considerable time breeding new varieties of tobacco containing a little nicotine, yet enough to satisfy the smoker.

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You have often seen a little boy blow a puff of cigarette smoke through a handkerchief, which he thereupon holds up, telling his admiring friends that the yellow stain is "Nicotine". But he is mistaken. The ingredients that stain the handkerchief (all but a little portion) are not nicotine, but a depoist of *tarry oils* from the burning of the tobacco. Many elders have been deceived as to just what this stain was.

This experiment attacks a problem which for three years has occupied the Government's attention. It has an important bearing upon the tobacco-growing everywhere; upon the trade in cigars, cigarettes and pipe tobaccos; now and then one meets a man who wants a strong cigar. But the general tendency is to a demand for mild tobaccos. (Mild tobacco contains a very small percentage of nicotine.) Hence certain recent experiments conducted by the Government Plant Bureau at Landsville, Pa., which have had for their object the breeding of new tobacco varieties "low in nicotine". It is a mere business of selection through a series of seasons, the seeds used for planting being taken in every instance from plants whose leaves have proved on chemical analysis to contain the smallest percentage of alkaloids. Of course, for the smoker's sake this might be carried too far, the experts might obtain varieties that contain almost no nicotine, for which they would hardly find a market. We all know it is nicotine that makes tobacco what it is.

Dr. W. W. Garner, in charge of the experiments at Landsville, Pa., beginning with tobacco leaves that had three and one-half per cent. of nicotine has reduced the percentage by his method to one and one-third per cent. He has, according to his report, obtained tobacco with not more than one-half of one per cent. of nicotine; but this is too little to satisfy the average smoker.

For the first time, knowledge on this subject is reduced to exact terms. But it should be clearly understood that the quality of a tobacco has nothing to do with the percentage of nicotine. A poor tobacco may have a high percentage of nicotine; a superior tobacco may have a low percentage; or it may be vice versa. Nicotine is what chemists call an "alkaloid," an organic compound peculiar to the tobacco plant. Too much nicotine may act as a poison. When a person is not accustomed to it, the drug, for it is properly to be regarded as such—may produce disastrous effects. Hence the sufferings of the small boy from his first experiment with tobacco. Even the experienced smoker may suffer, if after a long period of abstention, he indulges in a couple of fairly strong cigars. Nicotine is a powerful heart depresser, unless one is fortified against it by habit; the sufferer feels as if death actually was reaching

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for him. He turns pale; a frightful faintness overcomes him; a cold sweat breaks out all over him. Excessive use of nicotine may irritate the nerves—may even engender chronic nerveous troubles. It may interfere with the action of the heart. Too much nicotine (especially in the case of a cigarette smoker who inhales) may seriously affect the sight. Nicotine, when chemically separated from the tobacco leaf is a colorless liquid, indistinguishable, so far as appearance goes, from water. It is found in only one plant besides tobacco—a large shrub known to botanists as *Duboisia Hopwoodii*, that is native to the interior to Australia. The black tribes of that Island continent have used it for centuries.

If any kind of vegetable matter be burned, the chief products of the combustion are water-vapor and carbonic acid gas. Other products are ammonia and tarry oils, which latter are themselves very complex compounds. Among the products of tobacco burning, however, is one that is peculiar to tobacco, and this is *nicotine*.

The small amount of nicotine in cigar or cigarette being colorless is invisible to the naked eye. But it is easy to understand that the lungs of a cigarette smoker who inhales must in the course of time, become badly clogged with these waste products of combustion, and incidentaly much nicotine is taken into the system. Being deposited in the *lung-cells* through which the blood-stream continually pours the alkaloid is carried to all parts of the body, and the result is chronic poisoning. Nicotine is what gives to tobacco its stimulating effect. It is accompained, in the leaf and in the cigar or cigarette by other related substances, in relatively minute quantities one of which is called "pyridin," which is a posion pure and simple. Pyridin obtained from *coal-tar* is used to "*denature*" *alcohol*, it has a very unpleasant smell and can be detected after one has smoked and inhaled a cigarette. Nicotine is the "habit former" in tobacco, it is indeed a typical habit-forming drug—a species of "dope," though reasonably mild in its physicologic effects. The difficulty of giving up the tobacco habit, when once acquired, is well known. Tobacco that has not been properly cured is rich in tarry oils and added products hereafter described that bite the tongue. The smoke of such tobacco is pungent and irritates the throat.

I refer to *London Lancet*, April and August, 1912:

The Toxic Factor in Tobacco—

"Munch med. Wochenschrift," 1908, Dr. K. B. Lehman.

"Untersuchengen über das Tabakrauchen.

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"Therapeutics, Materia Medica and Pharmacy, including Antidotal and, Antagonistic Treatment of Poison," by Samuel C. L. Potter, A. M., M. D., M. R. C. P., etc., Philadelphia, 1913, twelfth edition.

"The Aristocracy of Health," by M. F. Henderson, Harpers's, N. Y., 1914.

"Commercial Organic Analysis," by Allen's Vol. VI, Philadelphia, 1914, fourth edition.

A. Trillat says:

Burnt tobacco from various sources in the form of cigars cigarettes, in clay and wooden pipes and the fornaldehyde in products of combustion was estimated as "tetramethyldiaminodiphenylmethane."

The quantity of formaldehyde formed varying little with the origion of the tobacco yielded 0.05 to 0.01 per cent of the weight of the substance burnt. Formaldehyde does not exist in free state in products of combustion but combines with nitrogenous fumes (such as nicotine) as present in the tobacco smoke to form compounds which possesses none of the deleterious properties of the two constituents.

A. Pinner says:

By interaction of nitrosohexahydronicotine and phenylsulphonic chloride phenylsulphonehexahydronicotine is formed.

These poisons have been isolated by scientific analysis are indentified as follows:

Mysterious Names—Poisons

Acetic acid
Acid tartrate
Acrolein
Advenaline
Alcohol
Aldehydes
Allatoin
Ammonia
Arsenic
Atropine
Benzoylnicotine
Betaine
Cadmium chloride
Caffetannic acid
Calerian
Calsium
Camphoric acid
Cannabis indica
Carbolic acid
Carbon dioxide
Carbon monoxide
Cochineal
Collidine
Creosote
Cyanide
Endermol
Endomentol
Formaldehyde
Gyanogen
Haimatoxylin

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Hydrogen sulphide
Hydrochloride
Hydrocyanic acid
Irridine
Lobelia
Lutadine
Molybdenium
Nicotine camphorate
Nicotine curare
Nitrosohexahydronicotine
Paroline
Pentachloride
Peroxydase
Phosphomolybdiic acid
Phenylsulphonehexahydronicotince
Picoline
Pilocarpine
Prussic acid
Pyridin
Rubidine
Silica
Silicolungstate
Solanine
Sulphide gases
Trigonophylla
Trigonellin
Tetramethyldiaminodiphenylmethane

All are associated with the smoking habit. Some of the various articles used in flavoring tobacco are: Sugar, honey, orange peel, lemon peel, mace, cloves, spices of all kinds, vanilla, licorice, tonka-bean, opiates, laudanum, Spanish wine, Santa Cruz rum, liquor of all sorts, peat, seaweed, tincture opium and copperas.

The tobacco plant is a great exhauster no matter where it is raised, it is all the same. It is a huge glutton, which, consuming all about it, like Homer's glutton of old, cries; "*More! Give me more!*" Tobacco exhausts the land beyond all other crops. A gum issues from green tobacco that covers everything it comes in contact with. It is a narcotic plant which no brute will eat, affords no mutriment, which every stomach loathes till cruelly drugged into submission, it stupifies the brain, shatters the nerves, destroys the coats of the stomach, creates an insatiable thirst for stimulants, and finally prepares the human system for fatal disease.

The sole advantage is that an individual may grow rich from raising, or selling it, but what one man gains is obtained at the cost of his son and his son's son. It is a culture productive of infinite wretchedness.

Startling Facts About Tobacco

It is upon the effects of tobacco-habit on body and mind that this whole question hinges and these effects must be determined by the opinions of medical men, scientific men, teachers and men of experience founded on experiments and observations, with such facts as corrobrate them.

I have therefore undertaken to treat this point fairly and to summon to my aid many prominent eye-witnesses as to the many mental and body diseases attributed to the account of "Mr. Nicotine."

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A chemical examination of a tobacco leaf shows its surface dotted with minute glands, which contain an oil, the proportion of this oil being seven per cent of the whole weight of the leaf. This oil is nicotine, one of the subtlest of poisons that determines the strength of tobacco. Physicians have studied its effect and thus sum them up.

"Nicotine primarily lowers circulation, quickens the respiration, and excites the muscular system; but its ultimate effect is general exhaustion, as administered in even the minutest doses, the results are alarming and in large quantities will occasion a man's death in from two to five minutes."

"The nicotine in one cigar if extracted and administered in a pure state, would suffice to kill two men."

The Indians used to poison their arrows by dipping them into nicotine, convulsions and often death being the result of these arrow wounds.

A pin drop of pure nicotine applied to the tongue of a mouse, cat, dog, squirrel or rabbit will cause instant death.

A frog, turtle or large fish placed in an aquarium and a drop of nicotine floating on the surface of the water, or a stream of tobacco smoke blown through a putty blower into the water caused instant death.

Breathing the poisoned air of oil of nicotine will cause severe headache and convulsions. It is this atmosphere which we find everywhere, and from which there seems to be no escape. Even with all the signs *—No smoking—Smoking positively forbidden—Nie rooken—Nicht rauchen—Ne fumez pas ici—Il est defendu de fumer—Hier wird nicht geraucht.*

Put a tobacco victim into a hot bath, let him remain there till a free persperation takes place; then drop a fly into the water and instant death ensues.

Hold white paper over tobacco smoke, and when the cigar is consumed, scrape the condensed smoke from the paper and put a small amount on the tongue of a cat; it will die of paralysis.

Among animals it is asserted that none can use the weed except the loathsome tobacco worm and the rock goat of Africa, the smell of the latter is so offensive that every other animal instinctively shuns it.

The daughter of a tobacconist from simply sleeping in a room where a large quantity of tobacco had been rasped, died soon after in frightful convulsions.

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An old pipe its father had used was given to a child to blow soap bubbles with. The child was taken sick and died in four days. The doctor said it was due to nicotine poison sucked in while blowing soap bubbles.

A child picked up a quid that had been thrown on the floor by her father, and taking it for a plum put it in her mouth, dying of the poison the same day.

Bocarme, of Belgium, was murdered in two and one-half minutes by a little drop of nicotine.

A very moderate quantity introduced into the system, or even applying the moistened leaves over the stomach, has suddenly extinguished life.

"So suddenly does tobacco poison the blood that "leeches" are instantly killed by the blood of smokers; so suddenly that they drop off dead immediately when they are applied."

It is pronounced perilous for a delicate person to sleep in a room with a habitual smoker.

Medical journals report the poisoning of babes sharing the bed of a tobacco using father, and even from being in the room where he smoked; and infant deaths have occured from no other cause.

Many an infant has been killed outright in its cradle by tobacco smoke with which a thoughtless father filled an unventilated room.

Much of the invalidism and also the positive ill-health of women is due to the poisoned atmosphere created around them by the smoking members of the household.

Dr. Robert Abbe in addressing the Practitioners Society of New York at a meeting said, "We all take our smoking very seriously, as if it were a necessity." On the contrary, it is a luxury, and an indulgence; a luxury which many smoking men can ill afford (for some it would represent an annual premium on a good life insurance); an indulgence that is never health-giving and often baneful."

Dr. Abbe's indictment against tobacco laid special stress on the way smoking causes cancer of the mouth and nose. He said out of one hundred cases of cancer of the mouth and throat treated by him in fifteen months, ninety of the patients were inveterate users of tobacco. In six weeks he had been consulted by ten patients with grave cancer of the throat or tongue, and every one of these was a heavy smoker. What he inveighs against is a constant smoking of strong tobacco, for tobacco smoke is an irritant and it is this constant irritation of the mouth that brings on cancer. He says it is a habit very easily sur-

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rendered in middle or late life, but not nearly so easy to give up in the boy cigarette fiends. In their case it is necessary to take them in groups, that they many have the psychological effect of companionship.

Quoting Dr. James Ewing, of Cornell University, discussing cancer and its treatment before the American Association for the Advancement of Science, declared radium was being over-estimated in the treatment of the disease and that cancer was curable if treatment was begun early enough. Another speaker said that smokers were especially liable to this infection.

"Although radium has produced very important palliative results in advanced cases of cancer, and has even, in a considerable number of cases, apparently caused a complete disappearance of the disease," said Dr. Ewing, "yet it cannot be relied upon to effect a permanent cure in the late stages of inoperable tumors, and therefore the importance of early diagnosis of cancer is again emphasized. For inoperable cases the value of radium, although great, is perhaps already over-estimated."

Dr. Joseph C. Bloodgood, of Johns Hopkins University, speaking from the surgeon's point of view, made it clear that cancer in its early stages is easily cured.

"The disease," he said, "usually springs from a preexisting lesion allowed to go unattended. In external cancer the warning is visible or can be felt. Unfortunately, pain is rarely present. A mole or a wart, a small area covered with a scab, a small lump or nodule beneath the skin, an unhealed wound, all of these may indicate potential cancer.

"No man ever had a cancer on the lip or tongue without experiencing some warning. The defect may be a burn from continued smoking or an irritation from ragged teeth. The probabilities of a cure are excellent when men heed such signals. Tobacco users are more subject to cancer than those who do not use it. The only miracle we have to perform is to educate a million persons where we now educate one."

A Government report shows that during eight months there were 65,000,000 cigars imported to this country from the Philippine Islands. These cigars were made mostly by women and children working long hours for a mere pittance.

Snuff, Sniffers and Adulterations

Snuff whether moist or high dried, should consist of nothing but tobacco leaves (with or without midribs) in a fairly divided state, being reduced to a powder after undergoing the process of fermentation, and in the manufacture of high dried snuff of roasting. Starches of the

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cereals, pea-meal, bran sawdust of various woods, malt, rootlets, fustic oxides of iron and lead and ground glass have formed at various times favorite adulterations with unprincipled manufacturers and tobacconists. The acorn-cups of a large species of oak, *Valonia*, growing on the shores of the Mediterranean, have been extensively used in the adulteration of high dried snuff.

In a town of eight thousand souls in one of our Southern tobacco producing states, sixty-five thousand dollars worth of snuffs was sold annually.

In any Southern State where the negro population comprises half of the residents, the snuff which is sold amounts annually to more than the cost of all farming implements of every kind, including cotton-gins, cotton-presses, steam engines for farm use and all sorts of mechanical tools.

In the old snuff-taking days a senatorial snuff box was kept on the stand of the Vice-President for the use of our legislators.

Chalmers once said, "Give me your pinches of snuff and I will support the church; give me your tobacco, cigars and snuff and I will support the whole Southern church and do it handsomely."

A beautiful illustration of this law of charity is the case of a philanthropist who was a snuff taker. When asked by a brandy-drinker, with whom he had been expostulating on his habit, whether he thought tobacco did him any good, he explained that he took snuff by the prescription of his physican for feeble eyes. "Well, sir," responded the gentleman, "your case is exactly like mine, I have a feeble stomach and have been compelled to take an occasional drop of spirits for its relief and restorative." "Is it possible," he asked himself, "that my taking snuff should serve as a pretext for drunkards to ruin both body and soul?" and the good man instantly abandoned the habit.

In 1624 Pope Urban VIII issued a bill excommunicating all who took snuff in church, while Queen Elizabeth authorized the beadles to confiscate the snuff boxes to their own use. In 1690 Pope Innocent renewed the bill of excommunication.

Frederick the Great at the Coronation of his mother, Queen of Prussia, observing that she watched her opportunity to take a pinch of snuff, sent a gentleman to remind her of what was due her high position.

Queen Elizabeth of England published an edict aganist its use, as a demoralizing factor, tending to reduce her subjects to the condition of those of savage habits they imitated.

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In Africa the Zulus make snuff of tobacco, dry aloes, and ashes, grinding it very fine. It is exceedingly pungent, causing tears to flow profusely down their cheeks, while they wipe off the tears with a snuff-spoon made of bone or horn; this being their handkerchief. Old and young of both sexes carry snuff-boxes made of small calabashes tied to a girdle around the waist, sometimes. diminutive reeds full of snuff are inserted in holes in their ears. When they meet after the usual salutation; "I see you friend"—the snuff is passed round, each taking a good pinch. It is a nasty habit, their nostrils after the operation being covered with filth.

A peculiar habit among the lower bred South Americans and Mexicans, is first to fill the nostrils with snuff, which is prevented from falling out by stuffing shag tobacco after it (plugging) then putting in each cheek a coil of pigtail tobacco (quidding) then lighting a cigar and smoking. A three in one way of becoming thin, nervous, and subjecting the body to a living death.

Can any picture be more revolting than that of the miserable snuff dipping woman of to-day. Their life is not life—hardly exis'ence—but one continuous stupor—faculties, feelings, conscience, everything *dead* except the single craving sense for snuff-snuff—more snuff.

But this dipping is not confined to the poor whites. In other classes, circles of young ladies and married ladies meet expressly to practice it. Each snuff dipper carries a bottle or box and also a swab, by which she conveys the filthy snuff to her mouth, afterwards perhaps passing it to her neighbor.

The ladies prepare the swab by taking a little stick of green wood about one-eighth of an inch in diameter like a match stick and chewing one end of it until the fibers are separated, giving it the appearance of a small broom. Saturating this with saliva, they dip it in their box of snuff, and then place it as far back in the mouth as possible, leaving the other end stick out. Many walk along the streets with the dip in their mouth.

While I was employed for two weeks in New York as a salesman for a large tobacco corporation, I was assigned to three stores. I was overwhelmingly surprised at the number of fine appearing ladies that came in and purchased little boxes of snuff. These diggers as I call them, however, conceal their performance, seeking the privacy of their own home when giving themselves up to their disgusting debauch. With a horn or spoon the abdominable stuff is deposited in the lower lip and thence when sufficiently moistened, passed around the mouth. At the rate snuff was purchased in one store, I can safely say that twenty

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thousand pounds are sold weekly in New York City to the diggers, conveyed to them by messenger boys, errand boys, and personal calls, all of which is consumed by women. The amount used by each digger varies from one quarter to a pound a week. But this unspeakably dreadful custom is by no means confined to grown-up women. Indeed it would seem to be, in the South, a part of a common school education; while the boys spit tobacco juice all over the floor, the girls hold their snuff-swab, or dip between the teeth, except indeed, when they share it with some less favored schoolmate. Many have supposed that snuff taking formerly so common among women and girls in the North, and what frequently was an understood part of the social gatherings had long died out. But it would seem that the habit has only changed its form and that from bad to very much worse. Indeed the use of snuff among factory girls, "to be as a sweet morsel between the cheek and gums is growing alarmingly prevalent."

Some Remarkable Figures About Tobacco

The internal revenue from tobacco for one year would build fourteen battleships of the first class; or it would pay the salary of the President of the United States for nearly a thousand years. It would pay the interest on the public debt for three years and there would be enough left over to add a dollar to the account of every savings bank depositor in the United States. The money spent by smokers for cigars only, not including tobacco-cigarettes, cigarettes, smoking or chewing tobacco and snuff would more than pay for the building of the Panama Canal besides taking care of the fifty million dollars paid to the French Canal Co.; and the Republic of Panama for the property and franchises, and in addition to this it would cover the cost of fortifying the Canal; or it would build a fleet of thirty-five transatlantic liners, each exactly like the lost Titanic. Coal them, provision them and keep them running between New York and Liverpool with a full completement of passengers and crew almost indefinitely or the sum would pay for the construction of two railroads around the earth of twenty thousand dollars a mile, or it would build a hundred thousand churches or a hundred thousand school houses or employ a half million preachers or lecturers, and a million teachers at a salary of five hundred dollars a year and have money to spare.

The annual per capita consumption of cigars in the United States counting men, women and children is eighty six cigars.

If all the cigars smoked in the United States in one year were put together, end to end they would girdle the earth, at it largest cir-

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cumferance twenty-two times. Reports show that above one hundred million pounds of manufactured tobacco and over one billion five hundred million cigars are used up in one year, at an expense of over two hundred and seventy five millions of dollars.

The City of New York with its six million population consumes one hundred million cigars annually at a cost of above ten million dollars, enough to build, equip and furnish the New Court House.

As to the cigarettes, there are 15 billion, 800 million consumed in one year. This means one billion five hundred and eighty million packages. 23,736,190 every day, 989,007 every hour, 16,482 every minute. With every tick of the watch night and day, the year round, the buts of 275 smoked up cigarettes are dropped from the hands of men and boys. More than a billion more cigarettes were made in the fiscal year of 1916 than in the previous year.

Cigarette smokers in the United States (not including those who roll their own smokes from tobacco) spend $60,645,966.36 for the little "white slavers," coffin nail, white cigars or mathematicians.

If all the cigarettes smoked in the United States in just one year were placed end to end and stood up, vertically they would make a pole rising 512,766 miles into the heavens. If strung on a wire they would reach from earth to moon and back again with enough left to circle the globe almost twice.

If this quantity of tobacco could be placed on one side of a huge balancing scale it would take the combined weight of four vast armies each consisting of one million men to pull down the other side of the scale.

This mass if transformed into roll tobacco two inches in diameter would coil around the world six times. It would need the space of the Egyptian Pyramid and the Eiffel Tower, or the space occupied by the Ford Automobile Factory in Detroit, Michigan.

The weight of the tobacco consumed in the United States in just one year is equal to the weight of the entire combined population of Delaware, Maryland, West Virginia, North Carolina, South Carolina, Georgia, Florida, Tennessee and Alabama.

The latest 1914 census figures of our national budget show our manufactured tobacco to be the fifth ranking product of the United States, far above Women's Clothing, Automobiles, Copper, Petroleum, Malt, Liquors, Bread and all bakery products.

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What more effective appeal to the heart and head can be made than by these figures while millions of tons of tobacco annually are consumed by smokers, chewers and sniffers, while from across the water the outstretched hands of the war suffers pleading and imploring beg for the bread of life, which must be denied for lack of means to send it.

Indefinitely continued comparisons can be had by consulting books upon the subject, so I conclude this chapter well aware that you, dear reader, have a clear idea of what cigars and cigarettes are costing America in a monetary way but what of the mental, moral and physical damage being done, surely it is a far greater significance, and suffering cannot be expressed in dollars and cents.

Still another point deserves consideration. Besides the hours that many spend on tobacco, from which, to say the least, they get no benefit, is the fact that the narcotic, by diminishing their force, tends to lessen the value of their remaining time. Moreover, it is estimated by medical men that the victims of the weed, on an average, cut short their life about one quarter. Thus from an average life of forty-five to fifty, about ten or twelve are sacrificed to this evil doer.

Nor is this all. In order to make a fair estimate of what the drug costs the country we ought to visit our custodial homes, almshouses reform schools, industrial schools, houses of correction, insane asylums, feeble minded homes, jails, penitentiaries, and prisons, to which poverty, disease and crime, resulting from the tobacco-fiend, with intemperance following in its wake, bring hundreds and thousands. For the support of all these we are taxed, and that doubly, since we are also assessed to supply many of them with the very poison that brought them there.

Forest fires in Massachusetts in 1908 caused by cigarette, cigar and pipe smokers, 111 in all amounts in money loss to $33,000.

In Connecticut in 1912, 116 such fires were caused by smokers.

One hundred million dollars is the estimated loss by fire in the United States every year caused by smokers.

A carelessly flung cigarette set fire to 100,000 gallons of gasoline and kerosene at the pier of the Texas Oil Company, at the foot of West First St., Bayonne, N. J. It caused a blaze that destroyed the pier

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and a barge and spread burning oil out over the water in a sheet of flame for several hundred yards, endangering the fireboats that had been called from New York. The damage was estimated at $250,000 when the oil had burned itself out and the fire was under control.

The blaze started among a pile of cans of gasoline shortly after 4 o'clock, where, it is supposed, one of the men engaged in loading the barge had hurriedly tossed a cigarette to escape observation by a foreman.

A fortunate change in the wind carried the flames away from six large storage tanks, each containing from 20,000 to 45,000 gallons of gasoline.

Mother and Wife Rescued from Burning House

A man, twenty five, went to bed with a lighted cigar in his mouth at his home in Port Morris, N. J. He died an hour later from burns. Railroad men who saw the flames rescued his wife and mother.

The Triangle shirtwaist factory fire in New York City was found by the New York Safety Board to have been caused by a cigarette. This cost one-hundred and forty lives—thousands of dollars paid out in life and fire insurance, made widows and orphans and an untold amount of sadness.

The old Equitable building, 120 Broadway, N. Y., was destroyed by fire in 1912, the cause having been the carless tossing of a match (after lighting a cigarette) into a waste-paper basket by a patron of the restaurant in the building.

The number of fires per year caused by carlessness with cigars and cigarettes, in New York City, in 1913 were 1,079; in 1914, 1,342, and in 1915, 1,306.

A woman speaking of her experience on Blackwells Island said:

"No one knows how terrible it is there. I was herded with women who had no difficulty in getting tobacco to smoke and chew."

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Two Loft Smokers Sentenced

Two prisoners tried in vain to convince Magistrate Cobb in the Municipal Term Court that cigarette-smoking is the best remedy for a toothache. What they succeeded in convincing him of was that the prison dentist at the Tombs was the right man to examine their teeth.

Both were of Brookyln, charged with smoking cigarettes in a down-town loft building, and both were sent to the Tombs on short sentences. One prisoner produced a wisdom tooth as evidence, with the remark:

"See, Judge, my tooth ached so badly that I had to have it pulled out. Smoking, believe me, drives the pain away."

"I was born in America and have been well educated. You should have more consideration for me than these foreigners caught smoking in the factory."

This insistance caused the offender to be fined $30 instead of $20, for smoking in a clothing factory. The magistrate thought his boast was all the more reason that he should obey the law. Several smoke law violators who could not read English were fined $20.

A deputy internal revenue collector, was arrainged before United States Commissioner charged with accepting bribes from tobacco dealers. His arrest, according to the Assistant United States District Attorney, reveals a loss of several hundred thousand dollars to the Government through tobacco frauds.

The public cigar cutter is a health menace.

America's most valuable crop is babies.

All "society ladies" smoke and drink, and a husband did not think that his wife should regard herself as better than they and refrain from the customs, according to her complaint in an action for a separation.

His wife alleges that he was cruel, principally in insisting that she drink cocktails and smoke cigarettes. She failed to comply with his wishes, she says, and was referred to by him in the future as "not a good sport."

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After smoking a daily average of sixty cigarettes for thirty-three years, a New Jersey gentleman has quit "the wicked weed" under orders of his physician.

He said that since he began smoking he had used approximately 722,700 cigarettes. If they all were made in one roll he would have a cigarette thirty-four miles long, valued at $7,227.

The pieces smoked by the man in thirty-three years would make a fair cargo for a steamship and produce enough smoke to smother the Greek army, or enough hot air to inflate a fleet of Zeppelins.

He is not a man who wastes time, and he was surprised to find that if he required ten minutes to smoke one cigarette he spent fourteen years doing away with the 722,700 items in his record.

Record 1916 Tax on Cigarettes

"The amount of cigarettes consumed by the American people in 1916 apparently was greater than in any other previous year since 1909 according to the tax returns to the Treasury Department. The amount of revenue collected by the Government on cigarettes during the year was the greatest on record."

Consumption of cigarettes in 1916 reached the highest mark ever recorded. The tremendous increase—more than 40 per cent. over 1915—is attributed to the growth in the cigarette habit among women and boys, and to the purchasing and exporting of cigarettes for the soldiers in the war zones.

The number of paper wrapper cigarettes upon which the Government levied a tax reached 25,232,960,928, as compared with 17,939,234,208 in 1915.

Cigarettes yielded internal revenue to the amount of $31,541,200 in 1916 and $22,424,042 in 1915. Tobacco exported in the last fiscal year amounted to $53,163,595.

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WHAT THE BIG MEN OF THE COUNTRY SAY ABOUT CIGARETTES

Cable Address "Edison, New York"

From the Laboratory
of
Thomas A. Edison,

Orange, N.J. April 26 1914

Friend Ford

The injurious agent in Cigarettes comes principally from the burning paper wrapper. The substance thereby formed, is called "Acrolein".
It has a vident action on the nerve centers, producing degeneration of the cells of the brain, which is quite rapid among boys.
Unlike most narcotics this degeneration, is permanent and uncontrollable.
I employ no person who smokes Cigarettes.

Yours

Thos A Edison

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Detroit Times March 20, 1916

"One hundred cigarettes a day were too much for Frank Winters aged 46 years, of this city. He was declared to have been mentally affected by excessive smoking in a certificate filed in the Probate Court, Saturday morning, by Dr. M. A. Layton.

"A petition asking for the commitment of Winters to an insane asylum was filed with the probate court by Joseph Perman, No. 542 Lawndale Ave., with whom Winters lives.

"His strange actions had made his associates think him insane. Dr. Layton declared in his report that he was unable to find well defined symptoms of insanity, but that cigarettes had made him simple minded."

Dr. Charles B. Towns, of New York, is a recognized authority on neurotics. He has for many years specialized in the treatment of nervous diseases. Recently he has been assisting Mrs. William K. Vanderbilt, Sr., in her crusade against drug habits. Here is his estimate of the cigarette as expressed in an article in the *Century Magazine*:

"It is generally admitted that in the immature the moderate use of tobacco stunts the normal growth of the body and mind, and causes various nervous disturbances, especially of the heart—disturbances which it causes in later life only when smoking has become excessive. That is to say, though a boy's stomach grows tolerant of nicotine to the extent of taking it without protest, the rest of the body keeps on protesting. Furthermore, all business men will tell you that tobacco damages a boy's usefulness in his work. This is necessarily so, since anything which lowers vitality creates some kind of incompetence. For the same reason, the boy who smokes excessively not only is unable to work vigorously, but he does not wish to work at all. If there were some instrument to determine it, in my opinion there would be seen a difference of fifteen per cent. in the general efficiency of smokers and non-smokers. And despite the fact that cigarette smoking is the worst form of tobacco addiction, virtually all boys who smoke start with cigarettes."

The relation of tobacco, especially in the form of cigarettes, and alcohol and opium is a very close one. "For years I have been dealing with alcoholism and morphinism, have gone into their every phase and aspect, have kept careful and minute details of between six and seven thousand cases, and I have never seen a case, except occasionally with women, which did not have a history of excessive tobacco. A boy always starts smoking before he starts drinking. If he is disposed to drink, that disposition will be increased by smoking, because the action

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of tobacco makes it normal for him to feel the need of stimulation. He is likely to go to alcohol to soothe the muscular unrest, to blunt the irritation he has received from tobacco. From alcohol he goes to morphine for the same reason. The nervous condition due to execssive drinking is allayed by morphine, just as the nervous condition due to excessive smoking is allayed by alcohol. Morphine is the legitimate consequence of alcohol, and alcohol is the legitimate consequence of tobacco. Cigarettes, drink and opium, is the logical and regular series."

The Burroughs Adding Machine Company's plant at Detroit, Mich., is one of the country's model industrial institutions, every attention being paid to the physical and mental well-being of the employes. Only the highest grade of machinists are employed and these are selected with care. (I have witnessed this during my lectures to these men.) Writes General Manager Lauver:

"We have taken no definite steps to suppress cigarette smoking other than to forbid the smoking of cigarettes in our office. I wish you success in your effort to correct the evils of cigarette smoking on the part of young boys, and am frank to say that, other things equal, we will always give preference for employment to boys and young men who do not smoke cigarettes."

The fame of John Wanamaker, merchant prince, with immense establishments in New York and Philadelphia, where thousands of persons are employed, is world-wide. Mr. Wanamaker says:

"The question of the use of tobacco and cigarettes by the young men who make application to us for employment comes in for serious consideration, and where there is evidence of the excessive use of cigarettes the applicant is invariably refused a place in our ranks."

THE WAY OF THE TRANSGRESSOR

By LEN G. SHAW

I shall not mention their names. That would be revealing indentities that might better not be disclosed, for the sake of both. Neither shall I sketch the two careers to intimately. If I did it is more than likely that even in his pitiable mental state the one would recognize the portrait of himself, and there is no desire on my part to add one jot to the mental anguish he must suffer when in the few lucid moments he is permitted to look back over opportunities that were worse than wasted.

* * *

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It was in the heat of a gubernatorial campaign in Michigan that I first met them—two fellows whom to know was to like. One was the star political writer on a metropolitan newspaper, the other a reporter on a small city daily.

They had struck up an acquaintance during the afternoon, while one of the gubernatorial candidates the political writer was accompanying on a spellbinding tour was making a speech at the country fair grounds.

We sat up late that night in the hotel lobby, swapping stories and talking over matters of mutual interest, and I was impressed by the striking similarity of characteristics in the two men. Both were splendid physical specimens of manhood, clean-cut, alert, immaculately attired—men who would attract attention in a crowd.

Scarcely had we settled down in our chairs when the political writer produced a box of cigarettes, and after extracting one for his own consumption passed them to his new-found acquaintance. They were declined with thanks.

"Ha," laughed the political writer, jokingly, "you have no small vices, eh?"

The reporter looked grave.

"I am not sure that is such a small vice," he replied slowly.

"Oh, well, we'll not quarrel over that," went on the political writer. "I do not smoke much myself."

* * *

It was some months later, in Lansing, that I met them. They were "covering" the legislature for rival papers in the same city, but this fact had no bearing on their friendship. They were inseparable and had come to be known as Damon and Pythias, so devoted were they to each other's interests. Only, wherever Damon was encountered he would be found puffing at a half-burned cigarette, or with feverish haste rolling a fresh one.

* * *

The years rolled by. I kept close track of the small town reporter who had developed into a star metropolitan man, and was turning his attention to theatrical reviewing with marked success. But the political writer had dropped from view, following a disagreement with the newspaper he served.

One day a shadow fell across my path, and I looked up to come face to face with the one-time star. He was bronzed. His clothes

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were in sore need of a valet, and his linen had not been on speaking terms with a laundry for some time back. He grinned at my gasp of astonishment.

"I don't wonder you are surprised," he went on. "You see, I've been down in Georgia, working on a peach farm. I had to do something, so I thought I'd cut out the old life for a time. I'm pretty near down and out—but I'll come back. I'm just as good today as I ever was, and I'll show those fellows that have turned against me. By the way, can you spare me a cigarette?"

* * *

A month or so later I was wandering along the docks, watching the operations of a gang of lumber shovers, when an overalled figure separated itself from the rest of the party and come shuffling over to where I stood. There was something familiar about the man, yet I had to look a second time before certain as to the identity of the grimy, perspiring individual.

"Yes, it's me," he volunteered, extending a calloused hand on the fingers of which the tell-tale yellow cigarette stains showed through the dirt. "You'd never have thought it of me, would you?"

There was a wistfulness in his tones, and it seemed almost as though tears glistened in the shifting eyes.

"You see," he went on, "it was a little dull in the newspaper business, and I had to live while something was turning up in the old game, so I'm down here for a little while. It doesn't pay very much—and it's awful hard work—but it's enough to keep me going until I get back. I can make good again. All I need is a fair show. I've got the stuff in me if I get a chance. And by the way"—

I hadn't. If I had possessed a cigarette, I think it would have been his without the asking. He craved it like a man recovering from a long spree craves a drink of whisky to slake his thirst.

From time to time strange stories reached me concerning the one-time political writer. He was successively panhandler, hobo and potato peeler in the kitchen of the country infirmary, to which he obtained admittance through the good offices of men who had known him in the prime of his career.

It was a crisp October morning suggestive of winter apparel. At a downtown corner stood a gaunt figure, from whose parchment-like countenance two fishy eyes stared forth uncomprehendingly. Under his arm he carried a small bundle of newspapers that he essayed unsuccess-

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Boys! Think of the result of Cigarette Smoking.

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fully to dispose of to passersby. And as he called the papers in a rasping monotone he pulled away at a cigarette "butt" he had picked from the gutter.

* * *

I saw him again the other day, moving unsteadily along the street, having eyes but not seeing, possessed of ears yet not hearing. The overalls that partly encased his withered limbs were frayed at the bottom and flapped about forlonly with every step. A checked blouse took the place of a coat. A ragged straw hat, whose original color had long since disappeared beneath a coat of grime, surmounted his tousled hair. His face resembled that of a coal heaver at the end of a day's toil. His hands, swinging loosely at his sides, were dark as those of an African.

I have seen men in the throes of delirium tremens, screeching for help at the top of their voices, while hospital attendants fought to restrain them. I never saw so horrible a spectacle as was represented by this one-time Beau Brummel, who had forfeited every claim to consideration, and sunk to unbelievable depths—victim of the Little White Slaver.

Not one of his former acquaintances would have recognized him in this pitiable condition—and it was well.

Possibly before you read these lines Death will have mercifully laid hold on this human derelict, and he will have passed to the great beyond.

* * *

The other man—the one who had "no small vices?" He is to-day dramatic editor of one of the leading New York newspapers, standing well toward the head of his profession, a man known personally by every actor and actress of consequence in the country, and whose opinions are accepted as authoritative.

The late Booker T. Washington, negro educator, and principal of The Tuskegee Normal and Industrial Institute, which he organized at Tuskegee, Alabama, declared that cigarettes cause a breaking down of will power and a blunting of the moral sense. He wrote: We have had some interesting experiences at Tuskegee Institute with boys who smoke cigarettes, for every year in the thousand or more young men assembled here there are, of course, a few who are addicted to this habit. We have a rule prohibiting smoking by our students.

"For disciplinary purposes our students are organized on a military basis with a commandant. Major J. B. Ramsey, who for many years has held this position, states that it is generally the students who have the cigarette habit who give the most trouble with reference to discipline.

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Their will power is broken down, their moral sense is blunted, and it is very difficult when inveterate smokers before coming here, to make anything of them; they will go any length, take any sort of risk to get an opportunity to smoke a cigarette. It may also interest you to know that in connection with our hospital, boys addicted to the cigarette habit are given regular treatment for its cure."

When Dr. Harvey Wiley was chief of the federal bureau of chemistry at Washington he had impure food and drug manufacturers on the run all the time. He is unquestionably the leading health and food authority in the United States to-day. Would you know his opinion of the cigarette?

"I commend Mr. Ford, Mr. Edison and all people who join them in efforts to curtail or restrict, obliterate or destroy the permicious habit of cigarette smoking. The use of cigarettes is making inroads on the strength of the nerves of all who smoke them, especially boys of tender years or women who smoke them because they think that the practice is smart. The effect may not be so bad on people of more mature years, but not in any case, no matter how old a man or woman, is smoking helpful. Besides constituting a nuisance, the financial strain connected with the use of tobacco stands between millions of people and home comforts."

Professor Winfield S. Hall, of Northwestern University, Evanston, Illinois, is one of the country's foremost physiologists. Professor Hall knows what smoking means, as he was for years addicted to the habit. Regarding the practice, and how it is viewed even by those who continue it, he says in the course of a personal letter to young men:

"Before entering the competition which is society's balance in which every aspirant for success must be weighed, suppose a young man seeks the advice of his elders as to what he can take or do to make his chances for success more certain or to make the success more complete. If he asks his father or grandfather, do you suppose he will be advised to begin the use of tobacco or opium or alcholic beverages? If he ask a physician, will he be advised to begin the use of some drug, as nicotine, morphine, cocaine, which will blunt his sensibilities, take the edge off his alertness, and make him care less if his tailor's bill is unpaid? These powers are the capital stock of a young man. Knowingly to decrease the value or efficiency of one's capital is recognized by all men as a very poor business proceeding.

"The young man may remind us that his father and his grandfather, his legal adviser, his physician, and his pastor all smoke, even though they with one accord advise young men not to follow their

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example. If these men just referred to have secured a measure of success, it was not because of their use of tobacco, but in spite of that habit. *It is usually more safe to be guided by the precept of our advisers than by their example.*

"Though many professional men use tobacco, I have yet to hear the first one advise a young man or boy to begin its use. If asked whether they would advise a young man to begin the use of tobacco, they uniformly answer, 'No.' Most men who use tobacco regret that they ever formed the habit, but make no effort, or at best only ineffectual efforts, to stop it. This is the universal experience with a drug habit, whether the drug be nicotine, alcohol or morphine."

The Cigarette a Slaver?

Here is a story taken from the *Detroit Free Press* so typical of the hold the cigarette takes on its victims as to require no comment further than to call attention to what one addicted to the use of the little white slaver did with his last fifteen cents as prison gates yawned to engulf him:

"Neil Benstead, 32 years old, fugitive from justice who surrendered himself to the Detroit police Sunday afternoon, even though he faces an unexpired term of seven years in Jackson, explains very frankly his reason for doing so." 'I had done seven years of a fourteen-year sentence for forgery and had been paroled when I laid down five worthless checks for $30 apiece in Memphis, Mich., about a year ago,' said Benstead. 'I easily made my escape to Ohio. There I went to work as a boiler-maker in a locomotive works at Lima, Ohio. I was making $25 a week and had $260 in the bank.

" 'Everything went along well until about two weeks ago when I saw two Lima plain clothes men looking over the men in the shop. I knew they were looking for me and made up my mind quickly. That evening I drew the $260 I had saved from the bank. I spent it having one last fling in Ohio cities. When I got to Toledo and found that I had just enough for fare to Detroit I boarded the car, intending to give myself up.

" 'I found that I had just fifteen cents left when I reached Detroit. *That went for a package of cigarettes.*'

"Benstead did not have a cent when the detectives searched his clothes."

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Once Defended Tobacco—Now He Feels Differently

One of the authorities quoted, in defense of tobacco was Dr. Leonard Keene Hirshberg, of Baltimore. Dr. Hirshberg did defend tobacco. He freely admits it. But he also frankly states that within a year his views have been entirely revised, because of the evidence adduced. In *Physical Culture Magazine* under the caption, "The Truth About Tobacco," Dr. Hirshberg says:

"Cigars, cigarettes, the pipe, and chewing tobacco are, like a certain notorious character, forever being haled into court before the bar of moral and scientific justice. With its moral aspect a scientist has nothing to do, but the truth is mighty, and must prevail, so the facts must, even though from day to day they seem to change, be brought out. Their eternal and ever shifting state may be judged from my analysis last year in *Harper's Weekly*, when I, a non-smoker, was forced to take up the cudgels in favor of smoking. Now after the lapse of a brief interval it must perforce be said that the world does move, because the evidence at hand seems to be against tobacco."

Dr. Pease Replies, Condemning Tobacco as the Most Poisonous and Destructive of Drugs

TO THE EDITOR OF THE EVENING SUN:

SIR—Nicotia Cara," who, in your issue of this date, says that tobacco smoking as a "harmless means of enjoyment" is either grossly ignorant or criminally untruthful. I would advise your readers to consult reputable authorities and warn the unwary not to accept the false statements of victims of drug addiction, tobacco being the most poisonous of drugs and so dangerous that it has been "kicked out of the pharmacopœia of every civilized country."

I would refer the reader to the findings of Dr. Jay W. Seaver of Yale, Prof. Hitchock of Amherst and Prof. William A. McKeever of the Kansas State College. Also the National Dispensatory, the United States Dispensatory and other standard works. Tobacco, more than any other factor, is degenerating the race with alarming rapidity and causing the untimely death of multitudes of our people. Among the self-slain—tobacco self-administered—are such well known men as Mark Twain, ex-President Grant, the late Gen. Federick D. Grant and President McKinley, who, the physicians said, would have recovered from the gunshot wound had he not had a tobacco heart. Beautiful examples of sensuous enjoyment in the use of a filthy, befouling and poisonous narcotic. The moral imbecility depicted, as con-

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trasted with majesty of manhood that is one with normality and self-sufficiency, is appalling and is explanatory of the advocacy of this drug addiction by its victims. CHAS. G. PEASE, M. D.

Radcliffe students at Cambridge, Mass., cannot smoke and at the same time expect to keep their rooms in dormitories, the faculty has decreed. Placards have been distributed about the dormitories and read by the hall mistresses to the student body forbidding indulgence in the weed—if they do use it, which most of them deny.

A member of the German Army Medical Corps, writing from the front to the Frankfurter Zeitung urges fruit and vegetables be sent to the soldiers in the fighting line. It is difficult, he says, to obtain either fruit or vegetables in France, and the lack of such fresh food at a time when men can obtain hardly any exercise is exerting a deleterious effect on their general health.

The men get an abundance of ordinary nourishing food the writer says, and he strongly recommends that their friends should send them fruit and jam instead of chocolate, tobacco, cigars and cigarettes.

When love can endure a dirty, tobacco-stained mouth without a shudder, it is the real article.

Law on Cigarettes

A tobacconist, who conducts a cigar and candy store on upper Broadway, N. Y., was arraigned in the Morrisania Court, charged with selling a package of cigarettes to a minor. The magistrate after hearing the evidence held the man in $200 bail for Special Sessions.

The policeman testified he saw a thirteen year old boy enter the store and purchase a package of cigarettes. The policeman informed the Court that the principal of the school near by had complained to his captain that a number of pupils were seen smoking cigarettes on several occasions. The boy was questioned and he admitted buying the cigarettes at the accused's.

The boy also admitted buying cigarettes from defendent on one other occasion. He stated that he delivered prescriptions for a druggist next to the defendent's store.

Defendent stated that every one in the neighborhood knew that the boy delivered packages for the druggist and when he came into his store for the cigarettes he believed it was for the durggist.

Matthias Nicoll, Jr., M. D., Secretary of the New York State Department of Health, writes that the law of New York State on cigarettes is Section 484 of the Penal Law as follows:

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"Sec. 484. A person who: * * * *

5. Sells, pays for or furnishes any cigar, cigarette or tobacco in any of its forms to any child actually or apparently under the age of sixteen years

* * * Is guilty of a misdemeanor.

It shall be no defense to a prosecution for a violation of subdivisions three, four, five or six of this section, that in the transaction upon which the prosecution is based the child acted as the agent or representative of another, or that the defendant dealt with such child as the agent or representative of another."

A law to make the smoker of a cigarette liable to arrest is in prospect. A bill with that provision has been passed by the Oklahoma House of Representatives.

One of the worst habits of the boy of to-day is the cigarette habit. It has long been recognized by all judges of the courts, especially in the juvenile courts, before whom pass thousands of boys addicted to cigarettes. In nearly every case this bad habit leads to another. The nicotine and poison in the cigarette whets an appetite for drink and all other demons of habit come in and add to the degradation that the cigarette began. In most every case the boy is made weak and finds it difficult to resist temptation because he has contracted this terrible habit which weakens his character, rendering him unable to resist evil when it attacks him.

The day is coming—the climax—when all business men of the country will refuse to employ boys and young men who smoke cigarettes, because they know by actual tests that the cigarette smoker cannot be trusted.

No boy does his duty to himself, his home, school, city, or his country, who indulges in this vicious habit of smoking cigarettes. Cigarettes subtract from the brain, multiplying your troubles, and divide you from that which you ought to have. No other habit is more responsible for the troubles of boys than the cigarette, coffin-nail or white cigar.

More stringent laws should be enacted and enforced, and something like the following would tend to decrease the ruining of our boys:

"Every person under the age of sixteen who shall smoke or use cigarettes, cigars, or tobacco in any public road, street or alley, park, or other lands used for public purposes, or in any public place of business or amusement, shall be punished by a fine of not more than $5.00 or by imprisonment of not more than ten days.

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"Any person who shall permit any person under the age of sixteen to use cigarettes, cigars, or tobacco in any form, in or upon the premises occupied by him, shall be punished for the first offense by a fine of not more than $10.00, and for any subsequent offense by a fine of not more than $25.00, or by imprisonment for not exceeding fifteen days."

Manufacturers and retailers giving away cigarettes or cigarette papers or tobacco to minors should also be dealt with according to laws to be enacted by state or city. Boys of the age of about fifteen years are often found smoking cigarettes, wasting their time in the pool-rooms trying to get the fifteen ball in the side pocket, spilling their energy, eating up their vitality, weakening the brain, indulging in crude and licentious pastime, and neglecting their body, which causes the loss of manhood, making the brain incapable of understanding, which is the short road to the home for the feeble-minded; instead of developing his brain to fit him to become able to bear the responsibility of fatherhood.

(*From the New York American*)

"CIGARETTES AND DRUGS DEVELOP GUNMEN"

Bernard Hartman, School Board Member, Opens Fight Against Sale of Tobacco to Children—Scores of Stores Violate Law by Selling Weeds and Dope to School Children, He Declares

Severely condemning the practice of certain storekeepers in Harlem and the Bronx of selling cigarettes and narcotics to school children and asserting that in this way gunmen and criminals are developed. Bernard Hartman, one of the prominent citizens of the upper section of the city and a member of the local school board, has launched a campaign against the offenders with a view of driving them out of business.

Mr. Hartman following an exhaustive investigation of the condition among the school children makes the assertion that half of the criminals of the city are created as a direct result of their first cigarette. Cigarettes, he contends, breeds in the undeveloped minor a desire for wildness, which if not curbed, leads the children to crime.

"In several schools of the city there are classes in which the main body of pupils is nothing more than staring-eyed boys, made incompetent to study because of their indulgence in cigarette smoking and gambling. There is every evidence, too, that many are not without a knowledge of the taste of cocaine. The evil is most insidious, and must be stamped out.

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From Schenectady Gazette, June 15, 1916

Dr. Krauss Addresses More Large Meetings

Dr. L. L. Krauss of the Bureau of Moral and Hygienic Education of New York City, who has been in Schenectady, N. Y. for several days, gave the second of his interesting talks yesterday noon at the American Locomotive Company. A large gathering of the employes listened to Dr. Krauss' remarks and appeared to be greatly interested in the work in which he is engaged.

Yesterday, assisted by Mrs. Krauss, who accompanied her husband on his flying trip to this city, 1,500 books and pamphlets treating of the work that is being done by this society, together with its aims and accomplishments, were distributed throughout the city. Mrs. Krauss started a campaign yesterday against the smoking of cigarettes by small boys, and endeavored to persuade them from this habit.

Last night Dr. Krauss spoke for two and one-half hours at State and Barrett Streets. To-day at noon Dr. Krauss will again address the employes of the General Electric Company, at the main gate, thus giving an opportunity for the two thousand or more office employes to hear him.

An Open Letter to Superintendents of Sunday Schools of Dutchess County

The eleventh day of June each year has been dedicated to the subject of cigarettes. I wish to call your attention to this fact, and knowing the bad effects of the use of same by our boys and the alluring advertisements of the cigarette that appear in some of our papers and magazines it would seem that every Sunday School superintendent should see to it, that the children in our Sunday Schools were made aware of the evil effects of the cigarette on their physical condition.

We ought to try to prevent the use of them before the habit is formed. What a blessing it would be if tobacco could be used as we believe God intended it should be, for the destruction of parasites instead of injuring the human.

Our state Sunday School officers request that the laws of our state regarding the cigarette be read in the schools on that day and I hope some explanation of them be given by superintendent or pastor.

If we expect to have clean citizens we must keep the children clean.

JOHN J. RYMPH, *Supt. of Temperance Dept.*

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Dr. Emanuel Deligtisch, the noted physician of New York City, writes: The overuse of tobacco among our young is indeed a serious problem. In spite of the public school instruction as to the physiologic action of tobacco and its poisonous effects, the consumption of tobacco is greatly on the increase. Cigarette smoking, unfortunately, is tolerated in some preparatory schools. In fact, a large number of young men under twenty-one years of age smoke excessively and to their detriment mentally and physically.

The symptoms of over smoking are seen in the impared chest and lung development, the impaired heart action, nutrition, injured nerves and weakened muscles are all matters of medical knowledge. I would emphatically state that growing boys should not be allowed to smoke, even if their fathers do.

The deleterious or harmful effects resulting from the use of tobacco is due to a poisonous alkaloid nicotine. It is the most important ingredient of tobacco or its smoke. In large doses this poison acts similar to hydrocyanic acid.

Nicotine acts mainly on the circulatory and central nervous systems. Experiments have shown that its action on the important centers in the brain is marked. There is first a stimulation, then death results from paralysis of the respatory center. The vagus nerve sends branches to the heart and other important viscera of the body. Nicotine at first stimulates this nerve, thereby slowing the heart. This is followed by paralysis of the nerve, which then causes the heart to beat very rapidly and irregular. We are all familiar with the rapid, irregular palpitating heart of people who use tobacco to excess. Nicotine causes salivation and vomiting, which is probably due to stimulation of the medulla in the brain. The effect on the blood vessels is important, causing a contraction of the vessels, due to vasomotor stimulation, which increases the blood pressure leading later on to arteriosclerosis or hardening of the arteries. Later on, when the ganglia which control the vessels become depressed, the pressure falls. The heart muscle eventually wears out mainly because of the lowered coronary pressure. The coronary vessels supply the heart with blood and hence when the coronary pressure is lowered, there is a retardation of the circulation to the heart. And as the heart does not receive the proper nourishment, it undergoes various fatty changes and wears out. The direct action of nicotine on the heart muscle causes it to become irritable.

Nicotine exerts its poisonous influence on the muscular system. The tone of the muscles is lowered and hence the individual user of tobacco and cigarettes cannot come up to the expectations, or do the amount of

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work of one who abstains from tobacco. It has a bad influence on the intestines, increasing peristalsis, and producing an irritability on the entire digestive tract. The toxicity of nicotine is very rapid and fatal. The vapor arising from a glass rod moistened with it and brought under the beak of a small bird causes it to drop dead at once. Tobacco contains a large quantity of nicotine. One cigar contains enough of nicotine which would prove fatal to two persons, if directly injected into the circulation. In cases of poisoning as occur in smoking, there is an increase flow of saliva, nausea and vomiting. The sweat glands are effected. There is a sense of exhaustion, palpitation of the heart, convulsions and collapse. Tobacco smoke contains other active poisonous substances beside nicotine as pyridin, preolin, quinolin. Pyridin is very irritating. All these cause local effects as biting of the tongue. The constant local irritation favors the development of cancer. It also irritates the mucous membrane of the mouth, throat and pharynx, causing hoarseness.

Nicotine effects vary to a great extent in different individuals. The young are much more readily poisoned than adults. The effects due to chronic intoxication with tobacco can be seen by palpitation of the heart, the pulse rate is quickened. The patient suffers from distress in breathing, digestive disturbances as loss of appetite, dyspepsia, inflammation of the bowels with diarrhea. All this tends to a lowering of the vitality with emaciation anemia, leaving the individual susceptible to any intercurrent disease that may attack him. He is restless at night and suffers from insomnia. There is a slowness and want of energy. He has a sallow, pasty look. His gait is rather unsteady and there is a general muscular debility with tremors leaving the individual without absolute control of his movements. There is an excitability of the nerve endings in the skin and hence suffers from headaches and neuralgia. Nicotine may also effect the nerve of the eyes, causing dimness of vision and also blindness.

Boys starting out in life who smoke cigarettes are under a severe handicap. It stunts their growth, and, as related above, lowers their vitality and prevents concentration, or prolonged mental effort which is concomitant and essential with the execution of doing good work. Smoking tends to inefficiency and, after all, it is the efficient man who is sought by everyone.

Realizing the deleterious and harmful effects of cigarette smoking which young boys often learn to indulge in, through bad companions, I would advise them not to smoke and start in life with a healthy body and mind which, eventually leads to the ladder of success.

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Excessive cigarette smoking caused 50 per cent. of the rejections at the United States Marine Corps recruiting station in New York City, according to a statement made by Captain Frank E. Evans, recruiting officer. The specific causes were faulty respiration and tachycardia, or rapid heart beat.

The Marine Corps standard is very high, Captain Evans explained. Of the last 159 applicants examined nearly half were found to have symptoms easily recognized as being the result of excessive of incessant cigarette smoking.

"The cause of the worst case of failure in the grade schools," said Hugh Daniel, a member of the Board of Education of Newburg, "has been ascribed by the teachers to the use of cigarettes." Mr. Daniel was discussing the case of a boy in one of the upper grades of the grammer school who had failed in all seven subjects. An investigation was made and the continued use of cigarettes was found to be a cause for the boy's dulled mentality.

Oakland, Cal. college presidents, if they are to be successful, must have other talents than scholarship, says David Starr Jordan, chancellor of Stanford University in an address before the National Education Association. One of the requirements for the position he gave was:

"He must not smoke."

The practice of tobacco manufacturers of including coupons in packages of cigarettes was dealt a severe blow when Commissioner of Internal Revenue ruled that such coupons may not be sent to any States without being sent to all of them.

The Supreme Court ruled that States may prohibit the giving of such coupons without their jurisdiction. Several States already have passed laws restraining the use of coupons.

In New York City, fifty-three cigar, cigarette and tobacco dealers after pleading guilty to charges preferred by internal revenue officials of having failed to keep their books properly, or to attach revenue stamps to packages containing their product, were sentenced to a day's imprisonment. They served their sentence in the court-room and were discharged at 4 o'clock in the afternoon. Fines running from $40 to $150 were imposed on forty-six of the number.

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By an arrangement between the Government and counsel for the Independent Tobacco Manufacturer's Association of which the defendants were members, the sum of $1,965,000 was paid to the Government as settlement money in addition to the individual fines.

Matched

The tobacconist watched her outside his shop window. For fully half an hour she stood there gazing through the panes. Then she came in. She fumbled and fussed, and at length brought forth a little packet. This she carefully untied till finally a small stub-end came to view. The tobacconist raised his eyebrows inquiringly.

"Good afternoon," said the lady, holding up the stub-end gingerly for inspection. "Here is a remnant of one of my husband's special cigars. Have you anything to match it?"

The fellow who has been sitting on the corner whittling pine and chewing tobacco will now begin to make arrangements to move inside by the stove.

Scientific Cigarette Facts

Something should be said about cigarette smoking which is becoming so prevalent, among our boys, and which is thought by many to be quite harmless. The Board of Agriculture of Ohio in bulletin number Two by Azor Thurston, Department Chemist, entitled "Cigarettes and their Analysis," gives the following result of his findings:

This department in the course of its regular narcotic work and in the investigation of narcotic sales invariably found quantities of the cheaper brands of the cigarettes with the opium outfits and abundant evidence that large qauntities of the cigarettes were consumed with the *opium*. The constant association of the use of cigarettes with narcotics and especially with the *opium* and cocaine habits, led to a more thorough investigation along this line with the result that the Drug Bureau called the attention of Hon. S. E. Strode, Commissioner in charge of the Diary and Food Division of the Agriculture Commission, to the conditions found. He immediately ordered a complete and full investigation and analysis of the various brands of cigarettes on sale in this State. The object was to determine if possible the cause for the so-called cigarette habit and to determine what substance if any, were added to the cigarettes. Reports had reached the Bureau that maunfacturers of cigarettes and cheap cigars were buying large quantities of Tincture Opium, but this bureau was unable to verify.

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From the report of the chemist Azor Thurston, which is hereinafter given in full we have drawn the following conclusions:

1. No added medicinal substance of a narcotic nature was found in the tobacco.

2. The tobacco products were found to be slightly lower in nicotine than the average leaf tobacco.

3. The papers were found to be treated with the carbonates and oxides of calcium, aluminum and magesium added probably to regulate the burning qualities.

4. The well known evil effects of habitual cigarette smoking must be attributed to the inhalation of the smoke or the products of combustion rather than to any *additional narcotic* in either the tobacco or the papers.

The work proved to be practically all original research work as an examination of American and Foreign authorities failed to locate any reports upon such work that could be used as a guide. Bureau of Drugs—N. R. Hower, Chief Drug Inspector.

The Analysis

Determinations were made as follows:

Nicotine—Ash—Water Soluble Ash—Water Insoluble Ash (By difference).

Hydrochloric acid insoluble ash—alkalinity of water soluble ash—alkalinity of water insoluble ash—opium and other drugs. The same determinations were made of the cigarette papers, except for nicotine, and further tests were made for nitrates in the papers.

So far as I know nearly all cigarette papers *have chemical fillers* presumably to improve their burning qualities.

Analysis of Cigarette Papers

	Austrian	French
Ash	4.95	5.12
Calcium oxide	88.80	84.02
Magnesium oxide	4.00	4.68
Iron, alumnia and silica oxide	6.15	2.15
Sodium and potassium salts	Trace	Trace
Moisture	4.30	4.62
Nitrates	Trace	Trace
Fiber	Linen	Linen
Organic fillers	Starch	Starch
Soluble constituents	Alkaline	Alkaline
Carbonate in filler as Co_2 at least	2.00	2.00

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RESULTS OF ANALYSIS OF TWENTY-SIX BRANDS OF CIGARETTES

Brand	Filler								Cigarette Papers						
	Nicotine	H_2O Sol. Ash.	H_2O Ins. Ash.	H C l Ins. Ash	Total Ash	Alk. H_2O Sol. Ash	Alk. H_2O Ins. Ash	Total Alkalinity Ash	H_2O Sol. Ash.	H_2O Ins. Ash.	H C l Ins. Ash	Total Ash	Alk. H_2O Sol. Ash	Alk. H_2O Ins. Ash	Total Alkalinity Ash
Nebo	2.03	3.46	18.34	....	21.80	1.53	12.18	13.71	3.21	14.30	....	17.51	6.03	26.60	32.63
Fatima	2.79	3.53	11.15	2.69	14.68	1.56	13.42	14.98	1.02	18.79	....	19.81	.99	40.79	41.78
Hassan*	1.94	3.73	12.83	4.31	16.56	2.35	7.40	9.75	.92	17.36	2.24	18.28	1.06	51.57	53.63
Sweet Caporal	2.05	3.02	10.49	4.90	13.51	.97	11.53	12.50	.96	1.06	....	2.02	3.25	.....	3.25
Nebo*	1.93	4.03	11.71	3.20	15.74	1.98	18.38	20.36	2.29	14.13	.36	16.42	5.49	29.96	35.35
Helmar	1.56	4.67	13.74	.02	18.41	3.89	22.69	26.58	.48	17.10	.02	17.58	.69	26.74	27.45
Mogul*	1.45	3.81	10.94	1.55	14.75	1.87	19.61	21.48	1.78	15.31	....	17.09	5.30	34.08	39.38
Egyptian*	1.59	4.09	14.74	3.15	18.83	2.72	24.40	27.12	1.08	17.16	....	18.24	1.83	36.26	38.09
Omar	1.98	3.64	10.74	2.84	14.38	2.35	18.44	20.79	4.19	14.02	.45	18.21	.37	35.51	35.88
Murad	1.52	3.48	12.92	2.13	16.40	3.71	22.87	26.58	1.04	16.72	.44	17.76	2.38	38.71	41.09
Royal Nestor	1.47	3.68	14.65	3.14	18.33	2.10	21.85	23.95	.47	17.94	2.88	18.41	.87	37.63	38.50
Turkish Trophies	1.44	4.08	12.92	2.68	17.00	3.00	18.95	21.95	1.90	16.36	.25	18.26	6.34	38.88	40.22
Home Run†	1.89	5.69	13.79	3.06	19.48	4.25	22.40	26.65	.93	4.04	.78	4.97	1.98	9.18	11.16
Home Run†	1.67	5.48	12.87	2.30	18.35	4.25	22.50	26.75	1.60	2.95	....	4.55	4.01	8.63	12.64
Home Run†	1.78	6.06	13.41	2.31	19.47	4.60	27.95	33.55	1.11	3.58	.74	4.69	3.72	9.51	13.23
Piedmont†	3.34	3.06	8.92	2.72	11.98	.45	13.05	13.50	.94	4.29	.72	5.23	1.59	7.60	9.19
Zubelda	1.97	3.63	10.68	1.93	14.31	2.28	18.15	20.83	1.49	20.63	.18	22.12	2.51	44.04	46.51
La Lucbana†	.43	6.92	15.01	2.12	21.93	6.50	23.60	30.11	2.16	10.21	1.13	12.41	2.03	21.61	23.64
Tareyton	1.75	3.67	10.51	1.66	14.18	1.36	18.39	18.75	.29	13.45	....	15.74	1.74	29.79	31.53
Egyptienne Luxury	1.60	3.88	12.11	2.03	15.99	2.75	20.00	22.75	.76	19.45	.59	20.21	1.23	52.87	54.10
Fifty Six	1.43	3.27	12.23	2.09	15.50	3.10	19.45	22.55	2.17	14.19	1.92	16.36	6.39	30.68	37.07
Rameses II	1.73	3.14	13.50	3.16	16.64	1.85	20.20	22.05	1.75	12.13	....	13.88	3.99	30.46	34.45
Schinasi	1.51	3.48	14.22	2.29	17.70	2.60	23.85	26.45	1.76	19.84	4.66	21.60	2.88	40 61	43.49
Condax†‡	1.06	3.30	11.67	1.83	14.97	2.50	20.50	23.00	1.53	15.39	.18	16.92	3.26	45.64	48.90
Egyptienne Straights	1.45	3.98	13.70	2.67	17.68	2.50	22.80	25.30	2.86	15.09	....	17.95	7.61	36.45	44.06
Egyptian Arabs	1.35	3.54	14.99	3.25	18.53	2.65	22.70	25.35	2.09	11.64	2.38	13.73	6.19	27.72	33.91
Makaroff	1.21	1.02	15.65	2.48	16.67	2.50	22.00	24.50	.62	10.64	.41	11.26	1.03	26.61	27.64
Phillip Morris & Company‡	1.48	3.50	13.44	3.10	16.94	2.00	20.50	22.50	1.88	15.18	.18	17.06	3.27	39.21	48.48
Average	1.69	3.89	12.92	2.13	16.81	2.64	19.65	22.29	1.54	13.39	.73	14.93	3.15	30.44	33.59

* Cork Tips. † Responds to the test for nitrates. ‡ Straw Tips.

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RESULTS OF ANALYSIS OF FIVE BRANDS OF CIGARS

Brand	Nicotine	H_2O Sol. Ash	H_2O Ins. Ash	H C 1 Ins. Ash	Total Ash	Alk. H_2O Sol. Ash	Alk. H_2O Ins. Ash	Total Alkalinity Ash
Cobs	1.48	7.15	14.88	2.36	22.03	4.15	28.85	33.00
Havana Plumes.....	1.26	5.83	14.58	4.27	20.41	3.60	29.90	33.50
Perfecto Garcia.....	1.53	6.81	14.50	2.22	21.30	3.75	25.00	28.75
ElVerso Havana.....	1.60	7.88	13.78	1.07	21.66	5.9	25.75	31.65
.....	1.73	4.22	22.12	6.25	26.34	1.8	33.6	35.40
Average.....	1.52	6.38	15.97	3.23	22.35	3.84	28.62	32.46

RESULTS OF ANALYSIS OF CHEWING TOBACCO

Mail Pouch.....	1.04	4.64	12.55	3.12	17.18	2.15	21.85	24.00
Honest Scrap.....	.98	6.38	10.84	1.99	17.22	2.1	20.55	22.65
Polar Bear.....	1.03	6.48	9.72	1.61	16.20	2.25	18.25	20.50
Tiger	1.50	5.94	6.35	.66	12.29	2.	12.7	14.7
Average.....	1.14	5.86	9.86	1.84	15.72	2.12	18.34	20.46

RESULTS OF ANALYSIS OF TOBACCO LEAVES WITH MIDRIBS REMOVED

Ohio Tobacco.....	3.34	8.42	13.76	2.33	22.18	4.80	24.55	29.35
Virginia Tobacco.....	3.38	5.17	6.79	2.04	11.96	4.15	9.95	14.10
Virginia Tobacco.....	2.41	3.97	8.39	2.49	12.36	1.55	13.05	14.60
Average.....	3.04	5.85	9.65	2.29	15.50	3.50	15.85	19.35

RESULTS OF ANALYSIS OF RIBS

From Ohio Tobacco...	1.48	9.53	8.82	.43	18.35	6.40	18.20	24.60

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Financial Loss to Smokers

How often will a man go through life without owning a house, when the money he spends on tobacco, if put on interest would be ample for the purchase of one? How many a family is cramped for the necessaries of life because the husband or father will not give up his cigar, cigarette or chewing tobacco? And how many a man, reduced to beggary, holds on to his pipe! Millions of wives are obliged to sacrifice their artistic tastes to this judgement. Music, books, pictures, excursions with the kiddies to the seashore or the mountains, a hundred and one little refinements and brighteners of the daily routing of life—all are swallowed up by this rapacious maw. No matter what self-denial the patient wife and mother may endure, provided the husband is not deprived of his smoke.

Suppose a young lad, whose earnings are very small, spends five cents a day for cigarettes, instead of this let him invest his money at compound interest. The amount in ten years will be $240.54, in twenty years $671.30, in thirty years $1,442.77. How much have you got Mr. Smoker at 40 years of age?

A gentleman at 40 remarked, "Twenty years ago, I figured up how much I was spending on cigarettes. I figured it out and stopped smoking and deposited the money thus saved when it had accumulated to three thousand dollars. I built a house with it and moved in with my family."

I have talked with many an inveterate smoker, many have said that they have spent in a life-time fifteen to twenty thousand dollars for tobacco and then asked me for the price of a bed and meal.

The Cigarette Habit

China has not hesitated to loose sixty million dollars Government income to bar opium out of that country. We should not hesitate to bar the use of tobacco by all in this country even at the cost of the revenue. It may surprise my readers to know that the Chinese physically and morally are now the leaders of the world.

I believe it would be a good move to force cigarette manufacturers to pay the expenses of maintaining the victims confined in State institutions.

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The same would hold good in the case of manufacturers and dispensers of liquors until the menace would be wiped out.

In Germany the mischief done to growing boys has been found so great that the Government through its perfect police system forbids lads under sixteen from smoking in the street. The Swiss canton of Schaffhausen issued a law some years ago prohibiting boys under fifteen from using tobacco on the streets or at home.

On our streets we behold a vast and ever-increasing number of young Americans who evidently consider smoking essential to manliness and alas our police have no orders to forbid it.

Boys sometimes at the age of six get their start, smoking, by pulling the silk from the corn, making cigarettes of wrapping paper, then playing, "fire in the gas house, boom, boom, boom." At eight, by rolling up tea or ground coffee in papers and smoking them as cigarettes. At nine he begins to pick discarded butts out of the gutter. I have seen little fellows assembled matching the gathered cigarette stubs, one will always be the leader, telling the boys around him "if they would like to see smoke come out of my eyes." Well, then he would say, "Put your hand on my chest." While the innocent unsuspecting beginner looks for the miracle to happen his hand is touched with the fiery end of the cigarette and thus he is initiated.

A boy of six who smokes, one of eight who chews tobacco, and a girl of nine who dips snuff, have been discovered by the United States Public Health Service.

Next the boys will be offered a "drag" of the cigarette held between the fingers, of the leader who tells him to draw or inhale it away into his mouth, hold it, then exhale it, immediately it inflicts upon the future victim a nausea, retching, a vomiting, a headache, to which the horrors of seasickness are not to be compared. There is a blue upper lip, the livid ghastly hue of the face, the eye like that of a dead fish, the limbs limp and are powerless, a violent and painful vomiting, a symptom of death, which it would soon be in a reality if the unutterable horror of the suffering did not compel the poor fool to postpone the attempt to become a man in that way. Here endeth the first lesson.

The silly boy resolves always that he will never touch tobacco again, and holds to his purpose until he has entirely recovered from the effects of his first lesson. Then he sees other youngsters like himself who have succeeded in conquering their disgust at tobacco. They

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have done it. Why not he? They laugh at him, call him white-livered, sissy, mollycoddle. They assure him that the worst of it will be over in a few days, or at most in a few weeks. They strut through the streets or in other public places so grandly; they have such a manly way with them; there is such a grace in the style of holding a cigarette between finger and thumb, and striking off the ashes with the little finger. When they put the cigarette into their mouths again, it is with such a flourish, and their heads are thrown back, a little on one side, with so much self-consciousness, their eyes at the same moment cast slyly right and left to see who observes and admirers them. Ah! this is quite irresistable and our poor, foolish youngster goes off behind the barn, or into some other out-of-the-way place, and takes a second lesson. All this is carefully concealed from the parents. The parent suspecting something remarks: "Son, don't let me catch you smoking a cigarette." To which he replies, "No, father I won't let you catch me." So the tobacco pupil must go to bed before supper, under the pretence of a headache. Pretence? It is no sham. He has a racking, splitting headache with the return of dreadful nausea. In a few weeks, more or less, our youngster has learned to smoke cigarettes, maybe chew tobacco, as the case may be.

All this painstaking and all this suffering voluntarily endured to make himself the slave of a terrible tyrant! "He little knows that a God more cunning than all the heathen divinities put together has bound him in his spell, and that he is in for a whole life of unspeakable abdominations."

In my experiences among the makers in the tobacco industries, I have found that tobacco commences its dreadful work in the factories, the operatives inhaling its dust and absorbing its poison, so that it takes about four years to kill off a worker.

Men have sometimes purposely disabled themselves for war by applying tobacco leaves to the pit of the arm, thus inducing alarming symptoms.

A laborer having cleaned his corncob pipe with a knife, he neglected to wipe, afterward happened to cut his thumb. The wound was so slight that he thought nothing of it. A few hours later, the thumb grew painful and swelled, the inflmmation quickly spreading through the hand. All remedies proved ineffectual, he was taken to the hospital where the hand was amputated as the only chance of saving his life.

A promising young man of fine constitution and correct habits, with a single exception of smoking, was found dead in his bed. Examina-

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tion showed the blood in one lung completely black from disintegrating effects of tobacco. According to the doctors it was this which killed him. Such are the characteristics of tobacco, making its prescription permissible only to the extremest cases, and with the utmost caution yet this most powerful, most fatal of all drugs it is which has come to be regarded by thousands as a daily necessity, more to them than meat or drink, or any earthly food.

The testimony on this point, both as to our own and foreign countries, is clear and overwhelming. Statistics obtained from American and European institutions show that lads whose standing had been good before they began to smoke or chew were invariably found, after they became addicted to either habit to fall below the school average.

A prominent tobacco manufacturer declares that nothing ever goes into tobacco so deleterious to the constitution as tobacco itself. Even the organ of the tobacco trade is forced to admit that "few things could be more pernicious for boys, growing youths, and persons of unformed constitution than the use of tobacco in any of its forms"—a truly significant confession.

A gentleman sitting on the veranda of a Palm Beach Hotel said to a friend: "See that portly man yonder smoking his perfecto, well he stands the racket all right, smoking don't kill him." "No, but he is killing his wife. See her by his side, pale, shrivelled, sinking into the grave. So far as health is concerned, his wife might about as well have married a bale of tobacco.

A farmer who, with a couple of friends smoked one evening in a room where a mere lad was asleep. When at midnight, the visitors withdrew, the farmer found the youth unconscious and insensible. All efforts for his restoration were fruitless. It was pronounced at the *post mortem* that he had died of congestion of the brain, caused by the respiration of tobacco smoke during sleep.

"Thomas S. Blair, M. D., Neurologist, Harrisburgh, Pa., Hospital in Public Hygiene, writes:

Cigarettes in America are a positive menace to health. Some unprincipled manufacturers started making "doped" cigarettes, using liatris and other intoxicating weeds. This created a demand and the abominable American cigarette (sometimes blamed upon Turkey and Egypt) will increase the American mortality record for years to come. I have made up myself the best cigarettes possible of manufacture and given the same to some "cigarette fiends" under my care. I have yet to

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find one of ths class of American degenerate who cared at all for an all-tobacco cigarette. I am well aware that certain manufacturers assert that their goods are wholly made of tobacco, good papers and a trifle of paste. But am also well aware that under the miscroscope these same cigarettes show leaf that bears no resemblance to any form of tobacco leaf I have ever examined. I cannot be induced to smoke an American cigarette and the few that I have tried in the past taste so abominably that it would take a great deal to convince me that they are made of undoped tobacco.

Smoking tobacco made of cigar trimmings and of scrap is cheap and usually pure, but apt to contain inferior leaf.

High class smoking tobacco is often pure and above reproach. Fine cut is largely adulterated and some smoking tobaccos contain Alfalfa, wood pulp, and various weeds. I have examined fourteen brands of "variously cut," granulated and other goods of like make. While I do not care to designate brands, I am amazed at the degree of adulteration found in this class of goods. I have known three men who were not accustomed to smoking that sort of trash, but did smoke real tobacco in a pipe, to faint when first trying this class of goods. I have also noted that "cigarette fiends" like these cut smoking tobaccos. I am far from saying that *all* these goods are bad, but I firmly believe that most of them are.

The reason I have taken up this matter here is because tobacco is not included in pure food legislation and could not be considered in the chapter devoted to pure food. There need to be some federal control of tobacco products and a drastic law imposing heavy penalties upon the adulteration of tobacco. So soon as some one asserts that tobacco is adulterated, a strenuous denial is made and even chemists' certificates are published. I should like to see explained what is done with the great bales of certain weeds gathered in the South and shipped North. So much secrecy is concerned in the matter that no one engaged in the collection of these weeds even knows their names. I have found it impossible to get into certain portions of some tobacco factories, but some of the workmen will talk and either these men or the manufacturers at the same plants fail to understand the details of their own business or are expert "explainers." And yet no one can really prove much. The chemical identification of tobacco presents difficulties, and the degree of adulteration of thoroughly incorporated and more or less chemically treated leaf make one man's guess about as good as another's,

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and no analysis worth much. It is a peculiar trade, and with plenty of honorable gentlemen engaged in it and a number of scoundrels and poisoners of our American youth."

I had occasion to visit the fair grounds of the big fair at Detroit, Michigan. I saw three lads twelve, thirteen and fifteen smoking a pipe and cigarettes. One was troubled with nervous trouble. I asked the youngest boy how long he was a smoker of cigarettes. His answer was five years. I explained the final result of a cigarette and he promised to quit the habit.

From New York we learn that several leading physicians in that city "unanimously condemn cigarette smoking as one of the most vile and most destructive evils ever befell the youth of any country; "declaring that" its direct tendency is a deterioration of the race."

There are in the big cities professional "cigar-butt grubbers, "that is, old men, boys, and girls who scour the principal streets, and in front of theatres, opera houses and saloons for the stumps of half-burnt cigars and cigarettes. A ragged nine year old boy, barefooted, and bareheaded was brought before a city magistrate, charged by an officer with vagrancy, who stated that he had found the boy in front of the opera house picking up cigar stumps. A sack half full of stumps soaked and dirty were offered in evidence. The magistrate asked the boy what he did with them, and he answered, "Me take to de man where I live and he makes nicea cigarette and stogies and sell them six for ten cents."

His Satanic Majesty's Fuel for Drinking Appetites

"Show me a drunkard who does not use tobacco, and I will show you a white blackbird," said Horace Greeley.

I visited many prisons in my travels, and have spoken to many convicts and ex-convicts all of whom blamed strong drink, a habit brought on by cigarettes as the cause of their downfall and incarseration.

Physicians everywhere say when introduced into the system in small quantities by smoking, chewing, or snuffing, tobacco acts as a narcotic, and produces for the time a calm feeling of mind and body, a state of mild stupor and repose. The condition changes to one of nervous restlessness and a general feeling of muscular weakness when its habitual use is temporarily interrupted. The body and mind feel in need of stimulation and there is great danger that a resort to alcohol need be had.

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The use of alcohol is frequently induced by that of tobacco, and I regard tobacco as having a worse effect than even liquor, and that more young men break down in body and mind and finally go astray as a result of smoking than of drinking, while the former often leads to the latter. In this view a multitude of medical men concur. I have been working in the tobacco industry and will briefly state how making up tobacco in some forms is carried on.

When tobacco is brought into the factory it is first carefully sorted, then dipped in a solution of sugar and licorice, passed through flavor-rollers which press through the leaves. The surplus extract flows off the rollers back into the solution from whence it came. Then it is dried; after which it is put into long narrow boxes. As each layer is placed into the box they are sprinkled with New England or Jamacia Rum till the box is filled and covered, left standing until well soaked when it is worked up into Chewing Tobacco—cheroots and other forms.

Chewing tobacco is injurious to health by depressing the nervous powers, by injuring the salivary glands, and creating an undue secretion of saliva.

Ill-Advised and Enticing Advertisements

"Say, son, do you know cigarettes are about the most ill-advised advertising appeal imaginable? Cigarette advertising should be addressed to men. What should we think about it if liquor advertising were addressed to boys? The offense would be different only in degree.—Editor and Publisher, N. Y.

When I was a boy I never saw the Journals or Bill Boards with so many misleading advertisements as you do now in reference to cigarettes. Such absurd statements which lead the young men of to-day to say, "Well it says the Doctor, Lawyer, Merchant, Judge, Artist, Editor, Engineer smoke them, why can't I?" not knowing that it does not refer to boys but misleading in their wording and cartoons.

The exhibits of cigarettes in the tobacconist windows and advertisements nowadays amazes the youth that he is led to believe that they are a health food instead of a poison. Such rot, as "absolutely pure," "100 per cent. pure, process patented," "patent blend," "expert blend," "the better kind," "wholesome tobacco," "sensible cigarette," the kind father smoked" and "gentleman's smoke."

Think, boys, think—ten in a package and the good news is only a nickle.

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One advertisement reads as follows— The——— cigarette will *not* give you muscle or good digestion. That's *idiotic!* It will not give you brains, put you into society or make you play a good game of golf. *That's rot!*

Another the open letters to prominent gentlemen who have no way of refuting the insinuation that lead the youth to believe these great men are cigarette smokers.

No wonder that in 1916 an increase of one billion more cigarettes is reported manufactured.

Result of Principal of High School Investigation

An interesting investigation has recently been made by Roy Dimmitt, principal of Ensley High School, Birmingham, Alabama, assisted by Joseph Kantor, a pupil.

Being convinced that cigarette smoking was detrimental to any growing boy, Mr. Dimmitt made this investigation in his own school to obtain facts.

Mr. Dimmitt said, "This experiment represents a series of investigations to determine the relative standing in the formal school activities of boys in the Ensley High School who are, and of those who are not, addicted to the habit of cigarette smoking.

"At the time this experiment was conducted there were 152 boys in school. Of this number 46 or about 30 per cent were cigarette smokers. Some had been smokers for several years with the habit firmly fixed; others were just beginning and had probably not yet experienced any evil effects from the habit. No distinction is made between these, however, and all are classed as 'smokers.' This may account to some extent for the closeness of the figures representing average grades. Those who do not use tobacco are herein classed as 'Non-smokers.'

"For comparison the pupils are further divided into groups of relative scholarship."

If smoking is bad for the athlete, and we believe it is, then it is all the more so for the growing boy of the non-athletic type or the one whose environment is such that he cannot or deos not get the proper out-of-door exercise.

Group A consists of boys who passed in all subjects for the semester unconditionally.

Group B consists of those who failed in one and not more than two subjects. (Conditional.)

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Group C consists of those who failed in more than two topics and hence failed of promotion. (Failed.)

Group D consists of those who, for various reasons, withdrew from school before the end of the semester. (Withdrawn.)

The data was assembled by Joseph Kantor, a pupil of Ensley High School.

Data—Boys in school, 152; smokers, 46 (30.26 per cent.); non-smokers, 106.

Group A (Promoted Pupils)

	Smokers Per cent.	Non-Smokers Per cent.
In Group A	26.1	73.8
Average days present (88 possible)	81	85
Average days absent	4	0.89
Average times tardy	1.81	0.9
Average deportment grades	91	92
Average English grades	72	73.4
Average Latin grades	72	73
Average History grades	76	78
Average Mathematics grades	78	87
Average Science grades	79	83
Average credits received	4.5	4.8

Group B (Conditioned Pupils)

In Group B	51.3	48.7
Average days present (88 possible)	74	82
Average days absent	3.4	2
Average times tardy	1.08	0.76
Average Deportment grades	87	85
Average English grades	61	66
Average Latin grades	52	55
Average History grades	63	68
Average Mathematics grades	69	72
Average Science grades	72	79
Average credits received	3.2	3.8

Summary

In school, 152	30.26	69.74
In Group A (Promoted)	26.1	73.8
In Group B (Conditioned)	51.3	48.7
In Group C (Failed)	62	38
In Group D (Withdrawn)	68	32

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Conclusions: It is interesting to note that out of the 25 groups of data given above, 24 groups are decidedly in favor of the pupils who do not use cigarettes. This is true not only in scholarship, but in attendance, punctuality and deportment as well.

The investigations failed to disclose whether the smoking of cigarettes caused the weakness in the pupils, or whether a general weakness from other sources caused pupils both to make low grades and to yield to the temptation of smoking.

However, the investigations did disclose this fact, whatever may be the causes, that unquestionably the non-smokers so far as this school is concerned, are the more desirable citizens in point of efficiency.

Dr. A. H. Sharpe, of the Cornell University Athletic Association, Ithaca, N. Y., writes:

"It is known that cigarettes contain a poison and that this hinders the full physical development of the body so that even our college statistics show the smokers to have less lung capacity, to weigh less and to be shorter than the non-smokers. On all of our athletic teams, it is part of our training rules that smoking should be discontinued during the training period, showing that those in charge of boys in physical competition realize that their charges might be handicapped by the influence of the poison; and yet if any boys could smoke with the least harmful results our "prep" school and college athletes could, because they are leading a life full of physical as well as mental activity and enjoy therefore the best of health.

Another reason why smoking is forbidden by athletic coaches is that for boys who have been accustomed to it, it necessitates the development of the moral quality of self-sacrifice, i. e., they must give up something they enjoy for the good of the team and a boy who is not willing to do that is not worth much to any team."

If a boy in his "teens" then has started to smoke and cares enough about his physical body, to say nothing of his nervous system, to give it a fair show he will cut out smoking until he has reached the age of twenty and then if he wants to smoke he is old enough to have developed enough sense to smoke in moderation and to have a body that is at least as well fitted to resist the poison as nature intended him to have.

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Suicide by Cigarettes

Mac Levy, of New York City the noted physiculturist and the successful upbuilder of broken down human bodies—writes:

Some persons at a time of mental derangement, commit suicide suddenly by taking prussic acid. Some do so more slowly in other ways. The cigarette smoker commits suicide slowly, but none the less positively. The rapidity with which he hastens his death, depends upon his own constitution, and the extent to which he indulges.

The person who is addicted to the excessive use of tobacco in any form, shortens his life from five to fifty years, according to circumstances. Moreover, the tobacco user cannot properly enjoy his shortened existence. He is liable to numerous diseases, including nervousness, irritability, insomnia, failing eyesight and many other troubles. His ability to earn money is restricted. He can do it fairly well during a period of his life while relying upon tobacco as a stimulant, or sedative; he could do it much better if he were to hold aloft from drugging himself with nicotine.

All that I assert, and far more, is absolutely proven by unquestionable authorities. Emminent medical men, sociologists, experts on insanity and other investigators, have made it perfectly clear through examination and research, that tobacco is a poison which is invariably harmful, and which is never beneficial.

Coming now to those who are addicted to the habit, and who wish to rid themselves of it, I am compelled to express both my sympathy and congratulation. The rule of quitting the enslaving addiction by force of will power, is too much of a strain for the average individual—and he fails. Drug treatments for curing the tobacco habit are objectionable to many. The right remedy lies in a careful selection of food and in the manner of eating; also in proper forms of exercise, and in mental diversion.

Facts About the Human Body

The average number of teeth is 32.—Don't spoil them with tobacco.

The weight of the circulating blood is 29 lbs.—Tobacco users loose.

The brain of a man exceeds twice that of any animal.—Don't degenerate yours to the animal level by excessive use of tobacco.

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The average weight of the brain of a man is 3½lbs.—Weight does not count if the brain is abnormal.

Five hundred and forty pounds, or one hogshead and one and a quarter pints of blood pass through the heart in one hour.—If you are not a tobacco user it passes through easy.

A man breathes about 20 times a minute.—Tobacco users can't say this.

The heart sends nearly 10 lbs. of blood through the veins and arteries each beat, and makes four beats while we breathe once.—You can't say so if you use tobacco.

One hundred and seventy-five million cells are in the lungs, which would cover a surface thirty times greater than the human body.—How many of your cells are closed due to tobacco?

The average of the pulse in infancy is 120 per minute; in manhood 80; at sixty years 60. The pulse of females is more rapid than that of males.—Tobacco users' pulse is irregular.

Robert Morris, M. D., President of the American Theraputic Society writes:

As a user of tobacco myself I have tried to make observations without prejudice relating to the cigarette question.

Adults who use cigarettes to excess are commonly of the neurotic type, and the poisonous effect of combustion products of the paper, in addition to the profound effect of tobacco when inhaled, gives rise to a more or less morbid mental and physical condition. Boys are particularly harmed by cigarettes. Cigarette smokers among boys are commonly the ones with nervous instability in the first place. They represent a defective group, broadly speaking. The strong normal boy with good physique has no craving for that "second personality" which goes with the influence of tobacco, alcohol or any of the so-called drugs. While cigarette smoking produces an injurious influence upon boys, I have assumed for some years that boys who smoke cigarettes were fundamentally defective to begin with, and that they are not the ones who are likely to accomplish much in life.

You will find my ideas on this subject expressed in a book entitled "Microbes and Men." (I would advise reading this book.)

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A Costly Habit

What would you think of any person that would propose—quite seriously—that you arrange your daily diet in such a way so as to have something like fifty per cent. of it consist of paprika and salt, the balance to be made up of eggs, milk, bread, meat and other substantials of human nutrition? It is plain that such an extraordinary overdose of condiments would not be devoid *per se* of any nutritious qualities, but that it would ruin in a short time the digestive organs to such an extent as to make them incapable of assimilating the nutritious half of a diet so composed.

If you think such a folly on the part of any human being so inherently unlikely to happen as to make the suppositious case hardly worth while your consideration, let me remind you, that all civilized mankind in general and all America in particular are eating in exactly in the case of such an individual as regards the bulk and price of stimulants consumed in proportion to actual food. There cannot be the slightest doubt that our national bill for intoxicating drinks and tobacco is at least equal in size, if not larger, than our annual bill for milk, meat, eggs, and vegetables consumed by a population of over one hundred million individuals.

So please, consider this in trying to figure averages: Our national bill for tobacco must not be divided by one hundred millions, or seventy-five, or even fifty, to arrive at a true average of individual expenditure.

Our women as a body, do not smoke—not yet, though the onmarch of feminism may yet claim for both sexes an equal share in all the stench-producing irritants procurable. Our babies, our infants, our school children do not smoke—not in America albeit school children consume large quantities of cigars in Spain, of cigarettes and chewing tobacco and snuff in the Southern States. On the whole, probably not more than twenty five million individuals are smoke-consumers in America. Yet these twenty five million suceed every ten years in burning to cinders an amount of potential prosperity sufficient to provide every indigent family in America with an independent landed estate and to improve every square inch of waste land between California and New York. Their effort to make American air unbreathable costs them more than the entire education of their children every year. And this habit of tobacco-smoking has succeeded, within a hundred and forty one years to engulf the whole nation. Our poets, painters and novelists are smokers, using stinking black pipes and the short briars formerly confined to the lower class,

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it seems to be the indespensable symbol of poetry and the fine arts. The birth of the nation in 1776 did not stop the onmarch of tobacco. During the one hundred and forty one years that have passed since the establishment of the United States of America, the tobacco habit has eaten its way into nearly every household in America, including the houses of the clergy. So thoroughly has this notion of tobacco as an indespensable item of human consumption taken hold of the official mind, that even prisoners under the rules and regulations of some of our correctional institutions throughout the country are entitled to a weekly allowance of the weed, deprivation of their weekly tobacco ration being considered a heavy punishment for infraction of the prison rules. From the prisoner in his cell to the highest in authority in America, tobacco holds spellbound wellnigh the complete sum total of our adult male population.

The entire social air of America is saturated with tobacco fumes. They are recklessly blown about into the faces of women and children, into the nostrils of healthy non-smokers by smokers suffering from infectious diseases of the mouth, throat or lungs, or else by healthy smokers into the faces and breathing channels of delicate patients and reconvalesants, with such total disregard for the comfort, health and lives of others as to put to shame our national reputation for politeness and considerate behaviour. Stop and consider for a moment what we are buying for millions of dollars per year. Americans above the age of fifteen are paying to the Government in revenue millions yearly for the priceless privilege of getting blear-eyed and defective of vision before they reach their thirty-fifth year. They are paying millions yearly for the propaganda and promotion of sore throats, gastric and pulmonary ailments, shaky nerves and cancer of the mouth. They pay this enarmous sum for the inestimable right to endanger the healthy, to poison the sick, to annoy women and children, to turn nearly every roofed and enclosed space in America into a depository of billions of disease germs. Well nigh every male adult in America pays, on an average, fifty dollars a year for an option on eye-diseases, nervous dypepsia, chronic bronchitis, cardiac failure and tremor of the limbs, all potentially to be brought about by the consumption of nicotine. Say that the average man smokes for twenty years before nicotine puts a lasting mark on him. What then? Why, he has paid a thousand dollars for the distinction of going about with water perpetually in his eyes, with a heart that beats six and skips three, with a voice too hoarse for command or entreaty and with muscles too flabbly for sustained action. Do you think the thousand dollars well invested? * * *

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SUPPLEMENT A

CONSEQUENCES OF THE TOBACCO HABIT

By JACOB GUTMAN, Phar. D., M. D., Brooklyn, N. Y.
Chief of Chemical Department and Attending Physician of German Hospital, Brooklyn, N. Y.; Prof. of Materia Medica at College of Jersey City.

In reference to your request for a statement of my opinion as to the use of tobacco, I regret that, because of lack of time, I am unable to give you a more detailed description of experiences derived during many years of practice. I have to limit my remarks, therefore, to only a few lines only.

The smoking of cigarettes or cigars is not only unnecessary, but distinctly *harmful.* I would like to remove the illusion lingering among many smokers who believe the use of cigars to be less vicious than cigarettes. This contention is wrong. It has been proved scientifically that the effect of the one is as injurious as the other. Another illusion existing among smokers is that nicotine is destroyed during the combustion of tobacco. This is also untrue. On the contrary, during the combustion of the tobacco the nicotine is freed from its salt and is inhaled in pure form, and in addition also numerous other just as harmful and health destroying agents are formed, such as hydrocyanic acid, carbon monoxide, pyridin bases, etc. It is unnecessary to devote too much space to the chemistry and pharmacology of tobacco. Suffice it to say that it contains ingredients sufficient to affect the organism deleteriously. I shall mention only a few clinical facts regarding tobacco.

1. A terribly depressing effect *upon the brain and its development.*
2. A harmful effect upon the *circulatory and digestive systems, and*
3. A degrading effect upon the *physical and moral status* of the individual.

They show themselves particularly in the young. Children who have been unfortunate enough to have acquired this habit in their early youth are usually of diminished stature, depressed mentality, with little vigor, lacking in ambition and poor in accomplishments. I needn't say anything about the moral depravity, the habit of lying, often stealing, and other such low actions on the part of the boys who acquire too early a smoking habit.

Tobacco also causes a harmful effect upon the heart by producing an irregular action of this most vital organ, nervousness, fainting spells, etc. It also causes nasal catarrh, pharyngeal inflammation, bronchial disturbances, coughs, expectorations, and such other similar conditions.

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The harm done by this so widely indulged habit exceeds very much the benefit claimed by some people to have been derived from it. It may perhaps produce occasional quietude of mind and apparent invigoration, but, if so, it is only temporary and unusual.

The correlation of *stomach and intestinal ulcers* with tobacco smoking is so well known as to need no mention. Perhaps 90 per cent of such ulcers in males are due in my experience to smoking. *Hardening of the blood vessels*, caused by the nicotine, is another consequence definitely established by scientists of the world. The occurrence of *cancer of the tonge* and *epithelioma of the lips* in smokers is another established fact.

I have been paying attention to the habits of my patients, particularly smoking, during the many years of my practice, and have been enabled to observe the deleterious effects of such habits. I am glad to say that in a great many cases I was successful in eliminating the harmful effect by ridding the patients of the habit, very much to their gratitude.

Hoping that these few remarks will more or less give you the requested information, and with best wishes of success in your wonderful and admirable work, I remain,

Yours very sincerely,

JACOB GUTMAN, M. D.

SUPPLEMENT B

A COUNTERBLAST TO TOBACCO

By JAMES THE FIRST, BY THE GRACE OF GOD KING OF ENGLAND, ETC.

That the manifold abuses of this vile custome of Tobacco-taking, may the better be espied; It is fit, that first you enter into Consideration both of the first Original thereof, and likewise of the Reasons of the first entery thereof into this Country; for certainly as such Customs that have their first Institution, either from a godly, necessary, or honourable ground, and are first brought in by the means of some worthy, vertuous, and great Personage; are ever, and most justly holden in great and reverent estimation and account by all wise, vertuous and temperate Spirits: So should it by the contrary, justly bring a great Disgrace into that sort of Customs, which having their Original from base Corruption and Barbarity, do in like sort, make their first entry into a Country, by an inconsiderate and childish affection of Novelty, as

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is the true case of the first Invention of Tobacco-taking, and of the first entry thereof amongst us. For Tobacco being a common Herb, which (though under divers names) grows almost everywhere, was first found out by some of the Barbarous Indians to be a Preservative, or Antidote against the Pox, a filthy Disease, whereunto these Barbarous People are (as all men Know) very much subject, what through the uncleanly and adust constitution of their Bodies, and what through the intemperate heat of their Climate. So that as from them, was first brought into Christendome, that most detesable Disease: So from them likewise was brought this use of Tobacco, as a stinking and unsavory Antidote for so corrupted and execrable a Malady; the stinking suffumingation hereof they yet use against that Disease, making so one Canker or Vermine to eat out another.

And now, good Countrymen, let us (I pray you) consider what Honor or Policy can move us to imitate the barbarous and beastly Manners of the wild, godless and slavish Indians, especially in so vile and stinking a Custome. Shall we that disdain to imitate the Manners of our Neighbour France, (having the stile of the great Christian Kingdome) and that cannot endure the Spirit of the Spaniards (their King being now comparable in largness of Dominions, to the greatest Emperour of Turkey; Shall we, I say, that have been so long civil and wealthy in Peace, famous and invincible in War, fortunate in both; We that have ever been able to Aid any of our Neighbours (but never deafed any of their Ears with any of our Supplications for assistance;) Shall we, I say, without blushing, abase ourselves so far, as to imitate these beastly Indians, Slaves to the Spaniards, Refuse to the World, and as yet Aliens from the holy Covenant of God? Why do we not as well imitate them in walking naked as they do, in preferring Glasses, Feathers and such toys, to Gold and precious Stones, as they do? Yea, why do we not deny God, and adore the Devil, as they do.

Now to the corrupted baseness of the first use of this Tobacco, doth very well agree the foolish and groundless first Entry thereof into this Kingdom: It is not so long since the first Entry of this abuse amongst us here, as this present Age cannot but very well remember, both the first Author, and the form of the first Introduction of it against us. It was neither brought in by King, great Conqueror, nor learned Doctor of Physick.

With the Report of a great Discovery for a Conquest, some two or three Savage men were brought in, together with this Savage Custome: But the pity is, the poor, wild, barbarous men died; but that vile barbarous Custome is yet alive, yea in fresh vigour; so as it seems a miracle

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to me, how a Custome springing from so vile a Ground, and brought in by a Father so generally hated, should be welcomed upon so slender a warrant: For if they that first put it in practice here, had remembered for what respect it was used by them from whence it came; I am sure they would have been loath to have taken so far the Imputation of that Disease upon them as they did, by using the Cure thereof; for *Sanis non est opus medico*, and Counter-Poysons are never used, but where Poyson is thought to proceed.

But since it is true, that divers Customs slightly grounded, and with no better warrant entered in a Common-wealth, may yet in the use of them thereafter, prove both necessary and profitable; it is therefore next to be examined, if there be not a full sympathy and true proportion between the base ground and foolish Entry, and the loathsome and hurtful use of this stinking Antidote.

I am now therefore heartily to pray you to consider, first upon what false and erroneous grounds you have first built the general good liking thereof; and next, what Sins toward God, and foolish Vanities before the World, you commit in the detestable use of it.

As for those deceitful grounds that have specially moved you to take a good and great conceit thereof: I shall content myself to examine here onely four of the Principals of them, two founded upon the Theorick of a deceivable appearance of Reason, and too of them upon the mistaken practick of general Experience.

First, It is thought by you a sure Aphorisme in the Physick; That the brains of all men being naturally cold and wet, all dry and hot things should be good for them, of which nature this stinking suffumigation is, and therefore of good use to them, of this Argument both the Proposition and the Assumption are false, and so the Conclusion cannot but be void of itself: For as to the Proposition, That because the Brains are cold and moist, therefore things that are hot and dry are best for them; it is an inept Consequence: For man being compound of the four Complexions (whose Fathers are the four Elements) although there be a mixture of them all, in all the parts of his body, yet must the divers parts of our Microcosme, or little World within ourselves, be diversly more inclined, some to one, some to another Complexion, according to the diversity of their uses; that of these Discords a perfect Harmony may be made up for the maintenance of the whole Body.

The application then of a thing of a contrary nature to any of these parts, is to interrupt them of their due function, and by consequence

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hurtful to the health of the whole Body; as if a man, because the Liver is as the fountain of Bloud, and, as it were, an Oven to the Stomach, would therefore apply and wear close upon his Liver and Stomach a Cake of Lead, he might within a very short time (I hope) be sustained very good cheap at an Ordinary, besides the clearing of his Conscience from that deadly sin of Gluttony: And as if because the Heart is full of vital Spirits and in perpetual motion; a man would therefore lay a heavy pound stone on his Breast, for staying and holding down that wanton Palpitation; I doubt not but his Breast would be more bruised with the weight thereof, then the Heart would be comforted with such a disagreeable and contrarious Cure. And even so it is with the Brains; for if a man because the Brains are cold and humide, would therefore use inwardly be smells, or outwardly by application, things of hot and dry quality; all the gain that he could make thereof, would onely be to put himself in great forwardness for running mad, by over-watching himself; the coldness and moisture of our Brains being the onely ordinary means that procure our Sleep and Rest. Indeed, I do not deny, that when it falls out that any of these, or any part of our Body, grows to be distempered, and to tend to an extremity beyond the compass of Nature temperate mixture, that in that case Cures of contrary qualities to the Intemperate inclination of that part being wisely prepared, and discreetly ministered, may be both necessary and helpful for strengthening and assisting Nature in the expulsion of he Enemies; for this is the true definition of all profitable Physick.

But first, These Cures ought not be used, but where there is need of them; the contrary whereof is daily practised in this general use of Tobacco, by all sorts and Complexions of people.

And next, I deny the *minor* of this Argument, as I have already said, in regard that this Tobacco is not simply of a dry and hot quality, but rather hath a certain venomous faculty joyned with the heat thereof, which makes it have an Antipathy against Nature, as by the hateful smell thereof doth well appear; for the Nose being the proper Organ and Convoy of the sense of smelling to the Brains, which are the onely fountain of that sense, doth ever serve us for an infallible witness, whether that Odour which we smell be healthful or hurtful to the Brain (except when it falls out that the sense itself is corrupted and abused, through some infirmity and distemper in the Brain:) And that the suffumigation thereof cannot have a drying quality, it needs no further probation, then that it is a smoke, all smoke and vapour being of itself Humide, as drawing near to the nature of the Air, and easie to be resolved again into water, whereof there needs no other proof but the

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meteors, which being bred of nothing else but of the vapors and exhalations sucked up by the Sun out of the Earth, the Sea and Waters; yet are the same smoky vapors turned and transformed into Rains, Snows, Dews, Hoar-Frosts, and such like watry meteors; as by the contrary, the rain Clouds are often transformed and evaporated in blustering Winds.

The second Argument grounded on a shew of Reason, is, that this filthy Smoke, as well through the heat and strength thereof, as by a natural force and quality, is able and fit to purge both the Head and Stomach of Rheumes and Distillations, as experience teacheth by the spitting, and avoiding Flegm, immediately after the taking of it. But the fallacy of this Argument may easily appear, by my late proceeding Description of the meteors; for even as the smoky vapours sucked by the Sun, and stayed in the lowest and cold Region of the Air, are there contracted into Clouds, and turned into Rain, and such other watry meteors; So this stinking Smoke being sucked up by the Nose, and imprisoned in the cold and moist Brains, is by their cold and wet faculty turned and cast forth again in watry Distillations, and so are you made free, and purged of nothing, but that wherewith you wilfully burdened yourselves; and therefore are you no wiser in taking Tobacco for purging you of Distillations, then if for preventing the Cholick, you would take all Kind of windy Meats and Drinks; and for preventing of the Stone, you would take all Kind of Meats and Drinks that would breed gravel in the Kidneys; and then when you were forced to avoid much wind out of your Stomach, and much gravel in your urine, that you should attribute the thank thereof to such nuorishments as breed those within you, that behoved either to be expelled by the force of Nature, or you to have burst at the broad side, as the Proverb is.

As for the other two Reasons founded upon Experience; The first of which is, That the whole people would not have taken so general a good liking thereof, if they had not by experience found it very soveraign and good for them: For answer thereunto, How easily the minds of any people, wherewith God hath replenished this World, may be drawn to the foolish affectation of any Novelty, I leave it to the discreet Judgment of any man that is reasonable.

Do we not daily see, that a man can no sooner bring over from beyond the Seas any new form of Apparel, but that he cannot be thought a man of Spirit, that would not presently imitate the same; and so from hand to hand it spreads, till it be practised by all; not for any commodity that is in it, but only because it is come to be the Fashion; for such is the force of that natural self-love in every one of us, and such

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is the corruption of envy bred in the Breast of every one, as we cannot be content, unless we imitate everything that our Fellows do, and so prove ourselves capable of everything whereof they are capable, like Apes, counterfeiting the Manners of others to our own destruction. For let one or two of the greatest Masters of Mathematics, in any of the two famous Universities, but constantly affirm any clear day, that they see some strange Apparition in the Skies; They will, I warrant you, be seconded by the greatest part of the Students in that Profession; So loath wile they be, to be thought inferiour to their Fellows either in depth of Knowledge or sharpness of Sight: and therefore the general good liking, and embracing of this foolish Custome, doth but onely proceed from that affectation of Novelty and pouplar Error, whereof I have already spoken.

And the other Argument, drawn from a mistaken experience, is but the more praticular probation of this general, because it is alleged to be found true by proof. That by the taking of Tobacco, divers, and very many, do find themselves cured of divers Disease, as on the other part no man ever received harm thereby. In this Argument, there is first a great mistaking, and next a monstrous absurdity; for is it not a very great mistaking, to take *non causam pro causa*, as they say in the Logicks; because peradventure when a sick man hath had his Disease at the heighth, he hath at that instant taken Tobacco, and afterward his Disease taking the natural course of Declining, and consequently the Patient of recovering his health, O then the Tobacco forsooth was the worker of that Miracle! beside that, it is a thing well known to all Physicians, That the apprehension and conceit of the Patient hath by awkening and uniting all natural efforts tending thereunto driven out both the devils of disease and tobacco.

This having, as I trust, sufficienty answered the most principal Arguments that are used in defense of this vile custome, it rests onely to inform you, what Sins and Vanities you commit in the filthy abuse thereof: First, Are you not guilty of sinful and shameful lust, that although you be troubled with no Disease, but in perfect health, yet can you not be merry if you lack Tobacco, lusting after it as the children of Israel did in the Wilderness after Onails. Secondly, It is a branch of the sin of Drunkeness; for as the only delight that Drunkards take in Wine, is in the strength of the taste and the force of the fume that mounts up to the Brain, so are not those the only qualities that make Tobacco delectable to all the Lovers of it? And as no man likes strong heady drink the first day, so do not all takers of tobacco have first to overcome their loathing? Thirdly, my countrymen, is it not the

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greatest sin of all, that by this continual vile costume you should grow so weak and effeminate as to be of no further service to your King and Country?

Now how you are by this Custome disabled in your Goods, let the Gentry of this Land bear witness, some of them bestowing three, some four hundred pounds a year upon this precious Stink, which, I am sure, might be bestowed upon many far better Uses.

And for the Vanities committed in this filthy Custome, is it not both great Vanity and Uncleanness, that at the Table, a place of Respect, of Cleanliness, of Modesty, men should not be ashamed to sit tossing Tobacco-pipes, and puffing the smoke of Tobacco one to another, making the filthy smoke and stink thereof to exhale athwart the Dishes, and infect the Air. Moreover, which is a great iniquity, and against all humanity, the Husband shall not be ashamed to reduce thereby his delicate Wife to that extremity, that either she must also corrupt her sweet Breath therewith, or else resolve to live in a perpetual stinking torment.

Have you not reason then to be ashamed, and to forbear this filthy Novelty, so basely grounded, so foolishly received, by the custome thereof making yourselves to be wondered at by all foreign civil Nations, and by all Strangers that come among you, to be scorned and contempted; a custome loathsome to the Eye, hateful to the Nose, harmful to the Brain, dangerous to the Lungs, and in the black stinking fume thereof, nearest resembling the horrible Stygian smoke of the Pit that is bottomless.

SUPPLEMENT C

TOBACCO BATTERED, AND THE PIPES SHATTERED

About their Ears that Idolize so Barbarous a Weed

(An English "Broadside" of 1672.)

Of all the plants which this earth's bosom yields,
In groves, glades, gardens, marshes, mountains, fields;
None so pernicious to man's life is known,
As is Tobacco, saving hemp alone.
Betwixt the two there seems great sympathy,

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To ruinate poor Adam's progeny;
For in them both a strangling virtue note,
And both of them do work upon the throat;
Upon this point, we may this riddle bring:
The subject hath more subjects than the King:
For *Don Tobacco* hath an ampler Reign,
Than *Don* Philippo, the great King of Spain,
In whose Dominions for the most it grows,
Nay, I must say, (oh horror to suppose!)
Heathenish Tobacco (almost everywhere)
In Christendom (Christ's outward Kingdom here)
Hath more Disciples than Christ hath, I fear,
More suits, more service, bodies, souls and good,
Than Christ that brought us with his precious blood:
Oh great Tobacco, greater than great Khan,
Great Turk, great Tartar, or great Tamerlan!
If there be any Herb in any place,
Most opposite to God's good Herb of Grace,
'Tis doubtless this; and this doth plainly prove it,
That for the most, most graceless men do love it;
Or rather, dote most on this withered weed,
Themselves as withered in all gracious deed.

SUPPLEMENT D

HISTORICAL CURIOSITIES CONCERNING THE TOBACCO HABIT

By GILBERT BURNETTE, F. LL.

In the year 1615 the Vice-Chancellor of Cambridge found it necessary to proclaim that "No graduate, scholler, or student presume to take tobacco into St. Mary's Church, upon pain of final expellinge the Universitie."

In 1651 the House of Commons considered the advisability of banishing tobacco from England.

King Charles I. was opposed to smoking; and King Charles II. wrote a letter to the University of Cambridge forbidding the members to wear periwigs, smoke tobacco, or read their sermons.

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In the times of James I. the price of tobacco was eighteen shillings per pound, and was chiefly sold in the shops of apothecaries.

Cromwell was an occasional smoker; many of the Puritans indulged in tobacco, and the following rhyme in "The Wits Recreation, 1650" proves how general smoking was in the Commonwealth period:

Tobacco engages
Both sexes, all ages,
The poor, as well as the wealthy,
From court to the cottage,
From childhood to dotage,
Both those that are sick and the healthy.
It plainly appears,
That in a few years,
Tobacco more custom hath gained
Than sack or than ale,
Though they double the tale
Of the times wherein they have reigned.

At the time of the Great Plague in London, people came to believe that smoking tobacco was a sure preservative against the disease, and so women and even children were encouraged to smoke. In some schools, even at Eton College, the boys had lessons in smoking every morning. It is related that a certain Etonian was soundly wipped for not "smoaking" at his master's bidding.

It appears that the Quakers made a formal protest against tobacco smoking. Their aversion to it has continued up to the present, because they consider it contrary to the laws of the Creator for his children to depend upon a narcotic drug for peace of mind and comfort.

The habit continued to spread during the regin of William III. It became so general among the members of the House of Commons that it became necessary to make a rule that no member was to take tobacco into the gallery or to the table sitting at Committees.

In the time of Queen Anne the poorer classes had become habitual smokers, the average cost being one penny a day all the year round. From the time of Queen Elizabeth to that of Queen Anne the smoking of pipes had been considered a sign of gentility and a fashionable accomplishment; but when the habit became general among the poor people, "the quality" became uneasy at the spectacle of the poor man doing the same as the rich, so they forsook their pipes and stopped smoking, and started a new accomplishment which they learned from the French.

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When tobacco is finely powdered it is called snuff; the leaders of society began to fill their nostrils with snuff, and to enjoy the new sensation.

The habits of the upper class were thus described in the year 1711 by some writers in the *Spectator*:

To such a height with these is fashion grown,

They feed their very nostrils with a spoon

Another writer complained of the handing round of the snuff-box in church and chapel. It appears that chewing was much in vogue in churches, for he adds, "Kneeling in church is prevented by the large amount of tobacco saliva ejected in all directions." The smoking of cigars was introduced into England by the military, who had learnt the habit in Spain, during the Peninsular War; while the habit of smoking cigarettes was acquired by our soldiers during the Crimean War. In the year 1795, the Wesleyan Conference passed a rule, that "no preacher shall use tobacco for smoking, for chewing, or in snuff, unless it be prescribed by a physician." In the year 1877, the Wesleyan Conference refused to rescind this rule. The rule is now ignored. At most of the Conferences smoking rooms are provided. The habit of smoking has been indulged in by a large number of the Bishops and Clergy of the Church of England. There are many of the Bishops and Clergy who do not smoke, but what a sad example a smoking clergyman sets the world. I presume they acquired the habit at the same time they were attending divinity lectures, and did it with the Knowledge, if not the sanction, of their tutors and professors. I cannot believe it is right for the authorities of our Universities to permit the undergraduates to acquire a habit which lowers the moral nature and lessens mental energy and bodily vigour. It would be better for a young man to be deprived of the advantages of a University than to run the risk of acquiring one of the worst habits of modern times.

It is trully a difficult task to rouse this nation to the danger of this habit. Indeed the task is beyond the power of man, singly or in combination, but with God nothing is impossible. Our Lord's orders to His disciples were simple: "Watch and pray? If we obey as a nation we shall conquor the habit and prosper as a nation, but if the nation continues in disobedience, smoking and slumbering, the nation will suffer.

About the year 1880, the cigarette became the fashion, and was soon taken up by boys and by foolish women. The evil of juvenile smoking soon became so great as to cause alarm. In the year 1907,

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the Legislature passed an Act rendering smoking illegal under the age of sixteen. In the year 1909, I made inquiries of General Booth as to the regulations in the Salvation Army, and I received the following statement in reply:

"Great Britain:

Local officers	32,229
Bandsmen	13,904
Corps Cadets	5,038

"Colonies and Foreign Countries—

Local officers	24,457
Bandsmen	7,208
Corps Cadets	5,191

"All these officers are total abstainers from alcohol and tobacco.

(Signed) "THEODORE KITCHING,
"*Lieut.-Col.*"

If General Booth has authority to insist on all his officers and bandsmen being abstainers from alcohol and tobacco, I wonder why the leaders of our own Church of England do not follow his excellent example.

SUPPLEMENT E

THE USE AND ABUSE OF TOBACCO

By WM. MARSDEN, M. D.,
Fellow of the Medical Society of London

I was asked a few days since by one of our ablest surgeons and most distinguished physicians, whether I had remarked the decided increase in the number of deaths from diseases of the brain since my coming into practice. Having admitted the proposition, my friend whose shrewdness and quickness of perception is characteristic, was disposed to assign as the principal cause the character and quality of the spirituous liquors so largely indulged in by all classes. My own experience and opinion, however, turn to another cause—the excessive use of tobacco, and had I not since laid my hand on Dr. Lizar's invaluable book, my own observation in the course of a long and extensive practice would have furnished me with proofs innumerable.

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For several years past the discussion of what has been called the "tobacco question" has engaged the attention of medical, as well as non-medical writers in Great Britain, and my erstwhile fellow-student, Mr. Solly, now a surgeon of St. Thomas' Hospital, London, has taken a prominent part in the discussion, and although the evils of excessive smoking prevail as estensively in Quebec as in Great Britain, the medical profession, to which the public looks as the rational exponent of sound principles in relation to man's health and physical habits, has hitherto been almost silent on the subject. If any medical man feels that by simply raising his voice he may be the means of saving the life, or preserving the health of a single fellow-being, who may be unconsciously shortening his days by indulging in what he calls an innocent pastime and luxury, *he is culpably negligent if he remains silent.*

"The profession" says Mr. Solly, "have no idea of the ignorance of the public regarding the nature of tobacco. Even intelligent, well-educated men stare in astonishment when you tell them tobacco is one of the most powerful poisons we possess. Now is this right? Has the medical profession done its duty? Ought we not, as a body, have told the public that of all our poisons, it is the most insidious, uncertain, and in full doses the most deadly?

"Dr. Lizar enumerates the constitutional effects of tobacco by stating that they are numerous and varied, consisting of giddiness, vomiting, dyspepsia, vitiated taste of the mouth, loose bowels, diseased liver, congestion of the brain, apoplexy, palsy, mania, loss of memory, blindness, deafness, nervousness, emasculation and cowardice."

Frightful as is this list of ills, I can from my own experience endorse its accuracy, and yet how large a number of our own profession are addicted to the vice, and how fatal must be the effect of their example upon the unthinking.

Professor Laycock, of Edinburgh University, says in a most temperate paper in the Medical Gazette, "I have known many instances in which I was unable to prove that the ordinary use of tobacco did any harm; I have known many more in which I could prove that it did do harm; and I have not known any good from it that might not have been obtained by other less objectionable means."

I will only make a few more extracts from Dr. Lizar's paper, in order to support the view I have enunciated that tobacco is the fruitful source of paralytic affections:

"Congestion of the brain, which is a frequent precursor of palsy, occurs almost only in those much addicted to smoking, with whom a

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cigar is never out of the mouth. It is denoted by headache, want of sleep, or rather restless nights, and occasional flushing of the countenance. Apoplexy has been noticed by several authors supervening the smoking of tobacco, also the immoderate use of snuff. The form of palsy produced by excessive smoking is almost always hemiplegia, and is usually incurable. Mania is a fearful result of the excessive use of tobacco, two cases of which I have witnessed. I have also to mention that a gentleman called on me and thanked me for my observations on tobacco, and related to me with deep emotion what occured in his own family from smoking tobacco. Two amiable younger brothers had gone deranged and committed suicide.

"I lately visited a gentleman in a lunatic asylum 'says Dr. Lizars,' labouring under general paralysis and his mind becoming idiotic. On corresponding with his former medical attendant I understand that his habits were moderate as to drink, but that he smoked to excess."

Dr. Webster cites among the causes of mental diseases the great use of tobacco, and he supports this opinion by a reference to the statistics of insanity in Germany.

"Loss of memory," says Dr. Lizars, "takes place in an extraordinary degree in the smoker, much more so than in the drunkard."

A valued and talented medical friend whose pipe is scarcely out of his mouth when at leisure, is an instance of the foregoing condition, and who, besides, suffers from fearful neuralgic attacks of the head; but alas, I have failed to convince him that tobacco is in any way the cause. To all who have suffered or may be suffering under the pernicious influence of tobacco, I cannot give any more useful or proper advice than is contained in the words of Dr. Lizar: "*Throw away your tobacco forever.*"

I think it should greatly aid me in my task, if I here insert an extract from "Essays by the late Sir Morell Makenzie, M. D." The MSS. came to the hands of his brother, by whom they were published in 1898.

There can be no doubt but that the professional opinions of that eminent throat specialist must have very great weight in the minds of my readers, especially so if they will consider the fact, that altogether Sir Morell was a smoker, yet in his "Essay on Tobacco," with the whole force of his professional talent, he gave his unbiased opinion to the world as to the detrimental effects of the tobacco habit. Surely these opinions are worth credence, and must inevitably carry conviction to *all* reasonable minds.

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Sir Morell Makenzie wrote thus: "Medical men who have eyes for such things, can see the baneful effects of immoderate smoking writ large on nearly every part of the mucous membrane of the throat. It is often the abuse of tobacco that is at the bottom of chronic congestion or other deviations from the normal condition of the throat which are put down to other causes.

"The effects of tobacco on the body are both general and local, it acts on the nervous centres and on the heart, as well as on the parts with which the smoke or the juice comes immediately in contact. It usually finds expression in what is vaguely called 'nervousness,' the pulse becomes flurried, and the muscles more or less relaxed and unsteady: this is why smoking is so strictly forbidden to men training for athletic feats. An occasional pipe or cigar would probably not be hurtful, but trainers are unamious in forbidding tobacco in any form. The cause of their attitude in this matter is, no doubt, the fear that moderation might lead to excess, and convinced as I am of the deplorable effects of over-indulgence in smoking on steadiness and percision of muscular movement, I cannot say that I feel surprised at the apprehension of trainers.

"So marked is the effect of tobacco in relaxing the whole of the muscular system, that before the days of chloroform it was employed in surgical operation, in which it was necessary that the muscles should be perfectly limp. It will thus be readily understood that under the influence of a drug possessing these properties, the delicate adjustments of the complicated vocal machinery are to some extent disordered; and the voice is out of tune and harsh. Something analogous to what takes place in the eyes as the result of the abuse of tobacco occurs in the larynx, or in the part of the brain which governs the movement of that organ. Occulists are familiar with tobacco 'ambylopia' that is *dimness* of sight, due to what may be called figuratively, *blurring* of the retina by tobacco smoke.

"The tongue often suffers severely from the effects of tobacco. Small excoriations, blisters, superficial inflammation, and white patches are formed on the surface of the organ, and a permanently unhealthy condition is induced, which in those predisposed to cancer is apt, under the influence of advancing age, or as the result of prolonged vocal irritation, to lead to the development of that disease. The same observation applies to the supeficial ulceration which effects the sides of the root of the tongue. In this situation there are a number of delicate projections, or so-called 'papillae,' the exquisitely fine points of which readily

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become inflamed when exposed to irritation. It is in this situation that cancer of the tongue is exceedingly apt to commence.

"Smoking at times causes chronic inflammation of the lips, which gives rise to cracks which are always very troublesome and not infrequently end in deadly disease.

"The effects of smoking on the throat, when the habit has not been too long indulged in, can as a rule, be easily cured by the simple remedy of discontinuing the practice which engendered them. In considering the evils produced by smoking, it should be borne in mind that there are two bad qualities in the fumes of tobacco: the one is the poisonous nicotine, and the other is the high temperature of the burning tobacco. The Oriental hookab, in which the smoke is cooled by being passed through water before reaching the mouth, is probably the least harmful form of indulgence in tobacco; and the cigarette, which is so much in vogue nowadays, is most certainly the worst. It owes this bad eminence to the very mildness of its action, people being tempted to smoke all day long, and easily accustoming themselves to inhale the fumes into their lungs, and thus saturating their lungs with poison.

"To conclude with a little practical advice: let him who wishes to keep in the perfect way, refrain from inhaling smoke and take it as an axiom, that the man in whom tobacco increases the flow of saliva to any marked degree is not intended by nature to smoke.

SUPPLEMENT F

TABLES OF COMPARISON BETWEEN SMOKERS AND NON-SMOKERS IN BIRTHRATES

By H. H. TIDSWELL, M. D.

I shall here review and compare two tabular abstracts based upon the complete genealogical histories of 38 fathers non-smokers and 57 fathers smokers.

TABLE 1: CONCEPTION

Class 1

Miscarriages	394
Still-born	210
Live-born	7368
Total	7972

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Class 2

Miscarriages	1035
Still-born	263
Live-born	6859
Total	8157

This table shows that the wives of the smokers had 185 more conceptions than the wives of the non-smokers, but that owing to a higher rate of mortality in the fœtuses, they had a lower birthrate of mature infants, the deficiency being 509 infants. If virility is defined as the power of procreating children, then this Table clearly indicates that the men in Class 2 possessed less virility than Class1. The number of live-born children is regarded as the proof of virility. Class 1 had the higher birthrate, therefore it is correct to assume that the class of smokers had lost some degree of virility. This Table clearly shows that the low birthrate among the wives of the smokers was not due to lack of fertility among the wives, as they had a larger number of conceptions than the wives of the non-smokers.

TABLE II: LOSS OF FŒTAL LIVES

Class 1

Abortions	394
Still-born	210
Total	604

Class 2

Abortions	1035
Still-born	263
Total	1298
Excess in Class 2	694

This table proves that the wives of the non-smokers had a loss of fœtal lives equal to a rate of 604 in 1,000 wives; and that the wives of smokers had a loss of fœtal lives equal to a rate of 1298 in 1000 wives. How can the excess among the latter be explained?

The wives in Class 2 were as healthy as those in Class 1 before marriage; they were on a par with the wives in Class 1, in all respects but one; they were exposed to the poison of tobacco, directly and indirectly, being the wives of smokers. None of the husbands in Class 2 were in any respect inferior to those in Class 1, except as a consequence of indulgence in tobacco.

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The Medical and also the Lay reader may perhaps be astonished that I should attribute the great excess of fœtal mortality in Class 2 as the direct consequence of the action of tobacco on the developing ovum; this excess is so very large that it indicates a large amount of poison in this Class 2. We can only speculate as to the immediate cause of an ovum. If in Class 1 maternal influences caused a loss of 604 fœtal lives, it is reasonable to assume that similar influences might also cause a similar fatal death-rate among the wives of smokers.

If then assume that the wives of Class 2 were responsible for the deaths of 604 fœtuses and no more, I must assume that the fathers were responsible for the balance of excess, viz. 694. This calculation may appear to be speculative, but it is not really so. The father must protect the wife from exposure to sewer gas, from all poisonous vapors, and especially from an atmosphere of tobacco smoke. We are dealing here not with theories, but with facts, and the facts indisputably show, that the wives of smokers had twice as many dead fœtuses as the wives of non-smokers.

(Extract from an article by Right Cross appeared in the New York Evening Journal, January 4th, 1917.)

Drink and Tobacco Only Opponents Les Darcy Fears; Bars Them

"The two most deadly opponents which any fighter can encounter are the drink and *smoke habits*," declared Les Darcy, the sensational Australian middle and heavyweight champion in summing up the many factors which have contributed to his meteroic rise to fame in the fistic world. "More ring champions have sacrificed their laurel wreaths in their endeavors to best these two habits than through any other cause. You cannot gain the decision over either. Both have long strings of successive K. O.'s to their credit.

"The fighter or athlete who thinks his constitution too strong to give way before the ravages of drink and smoke is the prize dunce of the day. I have witnessed the results of these habits too often not to know that they are fatal. The first lesson that every athlete should cram into his top piece is to refrain from his first drink and first smoke. If he can get this important lesson firmly entrenched in his gray matter, his battle to the foremost ranks of his profession will be more than half won.

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"The fact that I have yet to take my first drink and first smoke is, to my way of thinking, the greatest accomplishment of my ring career. It has contributed more to my success than anything else. I am satisfied that had I been a drinker or smoker, I never would have been able to reach the position I to-day occupy in the fistic world. No could I have gained sufficient courage to invade your shores and challenge your best fighters. I hope that the young men of your country will pay heed to these remarks of mine and forever push the habits of drink and smoke into the discard.

"It should not be necessary to go into details as to the bad effects of drink. There are undoubtedly enough examples in this country to demonstrate the curse of that poison. As to smoking it strikes me as being a very bad trait, for it fills the lungs with smoke and has a bad effect on breathing. Take an athlete who is addicted to smoking. He always breathes heavier than one who has never touched the weed. Also many cancerous growths result from an over-indulgence in smoking. An athlete who uses the weed possesses only half the staying powers of his brother who abstains.

"Another thing, the person who drinks or smokes never receives his correct proportion of sleep and rest. Take the heavy drinker or smoker and you will find the nervous uncomfortable sleeper. In fact, it is only after the brain of such a drinker or smoker is stupified by the effects of an over-dose of drinking or smoking that he is enabled to sleep at all.

"Without this extra portion of his poisonous dope the heavy drinker or smoker finds it almost a hopeless task to get the necessary amount of sleep to refresh his brain and body. Nothing is so necessary to good health as sleep. A person should take as least eight hours' rest a day. A few hours extra is never a bad prescription for anyone. I make it a steadfast rule to obtain at least eight hours of sleep.

Old King Cigarette, King Nicotine Will Be Given a Decent Burial

They are usually dressed in white, altho in some circles they are affect brown. Sometimes they were decorated with gold, and sometimes with cork. At times they have been known to be heavily perfumed. When King Cigarette blinked at you with his one red eye, partially hidden, usually, under flecks of grey, he lulled you into a feeling of

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restfulness, and he shaped fantastic figures in your vision. At the same time, he burned out your lungs, discolored your fingers, and shattered your nerves.

You remember them. Well, the poor little vagabonds are dead. They have been losing strength, day by day, everywhere they are passing out entirely, and they are dead and dying practically without friends. You will realize that you are about to attend the obsequeies of old King Cigarette and King Nicotine.

Two Women—Both Blind

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The Prize Method of Curing the Effects of Excessive Smoking

"How do you treat the effects of excessive smoking?" was the question the New York Medical Journal put to physicians recently, with an offer of a $25 prize for the best answer. The prize was won by Dr. Thomas W. Jenkins of Albany, N. Y., with an essay substantially as follows:

Considering the large quantities of tobacco used, very little harm results, and care should be taken not to incriminate tobacco when the troubles under observation may be due to other causes. It is especially perilous to order middle-aged smokers to refrain from tobacco in the hope of curing heart conditions.

Tobacco may produce nervousness, local paralysis, gout, rehumatism, dyspepsia, general increased blood pressure and a dryness of the throat that leads to excessive drinking.

The acute symptoms are nausea, vomiting, purging, pallor, giddiness, depression, tremors, contracted pupils and clonic convulsions. The treatment for such cases is the withdrawal of tobacco, and dram doses of aromatic spirits of ammonia in plenty of water, along with hypodermic injections of caffein and nitroglycerin.

Chronic troubles due to long continued excess are easily remedied when the smoker will give up tobacco. But when he won't he must be persuaded to use a long stemmed Turkish pipe in which the smoke passes through water. His cigars should be long and thick and be thrown away when half consumed. He should be adivsed to smoke only after each meal and just before going to bed and the after-meal smoke should be postponed as long as possible. He should drink much water.

Dr. John Aikman of Rochester read a paper before the Medical Society of Monroe Coutny, on the effects of smoking on the circulation of the blood, in which he described tests made by him on twenty-seven men between sixteen and thirty-one years of age. Each of them sat quietly in a chair chatting about ordinary topics and smoking a Turkish cigarette, the same brand being used in all the cases. Dr. Aikman kept a record of the pulse before, during, and after the smoke.

Sixteen out of twenty-seven subjects showed an increase of more than eight pulse beats a minute. All except four gave an increase and two of the four had an abnormally high pulse at the start, while the other

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two had smoked less than an hour before. The average increase was fourteen beats. In ten cases the regular pulse became irregular. In several the effect was present for fifteen minutes at least after smoking ceased.

Dr. Aikman asks if it may not be possible that the general increase of diseases of the circulartory system which is so noticeable to-day may not be in part attributable to the disturbances of the circulation produced by smoking frequently repeated daily for years.

THE HABIT CONQUERED

The best substitute known is chamomile tea. (Ten cents worth.)

From the dried flowers, make a tea as the ordinary tea. Use it every day at your meals and at night it gives quick relief and is good for all forms of nervousness. A little box of pulverized ginger should be carried in the vest pocket so that you can take a pinch once in a while, or when you smell tobacco smoke or have a craving to smoke. When dining with friends and you have a longing for a cigar just take an oyster on the half shell, sprinkle it with a little red pepper and swallow. The craving will instantly be removed. Bread or cheese similarly seasoned will do as well.

Obtain ten cents worth of each of the following:

Genetian, sassafras, lovage, licorice flag and marshmallow. Mix these together, use them to chew on and the saliva will appease your palate and stomach. Sweet fern, in a clean clay pipe may be smoked only when you think you cannot do without a smoke. A warm bath for fourteen consecutive nights as follows: Bath tub half full of luke-warm water; wrap your body in a sheet very tight; lie in the warm water, turn on hot water until very hot; stay in the water for 20 minutes (use no soap), allow the water to run out, then arise; allow the water to drip off. While standing, remove sheet and wipe body dry, then take chamomile tea and retire under light cover. You will get away from the old tobacco habit and say far thee well Mr. Nicotine.

I have received thousands of letters of commendation from men and boys, whom this helped to conquer the tobacco habit, and I hope you, my dear reader, will pass this good work on to those who may need it, so as we can win our battle for a cleaner and healthier generation.

I thank you.

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Value of Good, Sound Health.

Health consists in the normal and vigorous action of all the physical functions and organs; disease in their feeble, imperfect, or abnormal action; and death in their suspension. Life and health are proportionate to each other. Viewed in any and all aspects, *Health is life.*

Its value, therefore, equals that of all else. It is our richest possession, because it alone imparts the greatest attainable zest and relish to whatever we posses. Without it, what can man, woman, child, or even bird or beast do, become, or enjoy? Other things being equal, our capacities for accomplishing and enjoying are proportionate to its vigor, but become enfeebled as it declines. No attainable amount of wealth, honor, learning, or anything else whatever can make us happy any further than we have *health* with which to enjoy them; and the value of all we possess diminishes in proportion as we become sickly. With how keen a zest those in health relish delicious foods and fruits, which only nauseate those whose diseases have destroyed their appetite. The rich invalid is pitiably poor, because he cannot enjoy his possessions; while all who are healthy are therefore rich, because their fund of life turns all surroundings into means of enjoyment.

The healthy servant is richer, because happier than his feeble millionaire master, and the robust peasant, than his infirm king. Those who have always enjoyed health, little realize its value. As we admeasure time only by its loss, so none can duly prize the worth of health till it declines. Brought to the gates of death, our last hour come, what would we give, what not give, for another year of life and health, with all their plesaures!

Millions would be cheap, because *health* is so immeasurable, more promotive of happiness, that only measure of all values, than riches, than all else combined. To all, in all conditions, it is life's pearl of greatest price!

This trifling with health, so almost universal, how consummately foolish? Esau's folly was wisdom in comparison with theirs who, in sheer carlessness, exchange a lifetime of vigor for one of feebleness.

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And some barter away life itself for some momentary indulgence! A foolish ambition breaks down constitutions by thousands. Unwilling to be outdone, they work at the top of their strength just as long as they can stand, or overheat themselves, or drink cold water while too warm, or in one way or another bring on in a day or week complaints which debilitate them for life, and hurry them into premature graves!

A good staminate constitution therefore, becomes about as valuable as that life it manifests. Since good eyes are as valuable as are all the knowledge and happiness they impart, and thus of all the other individual organs, of course the value of a good body over a poor one is measured by all the increased powers to enjoy and accomplish what it gives. By over-driving, or foundering, or injuring a splendid horse, you take his zest and snap out of him ever after. Before he needed no whip, after, he performs much less *with* one than before without. That one injury diminished his *power* to accomplish one-half or two-thirds, and made him an old horse in constitution, though young in years. So when your constitution is once sapped, farewell to half or more of your life zest, capacities, and enjoyment! An ambitious youth, just to finish cradling before his neighbor, worked to complete exhaustion, and finished a few hours the soonest; but in doing so lamed his hip and side for life; contracted a two months' sickness, from which he barely recovered with his life, but with a broken down constitution, so that he has since been able to do but little work, and many kinds not at all; besides suffering perpetual pain those twenty-five years since! That single day's work did him vastly more injury than any fortune could ever do him good; because it inflicted on him much more pain than any amount of money could ever give him pleasure. It weakened all his capacities to do and enjoy, besides enhancing all his sufferings, for life, which it will shorten many years. He received no extra pay for this destruction of health, yet sacrificed an incalculable amount of happiness and life on the altar of a foolish emulation! But like instances of like folly—folly? the worst form of *wickedness*—are common.

Why reader of twenty-five, if not of twenty, by some abuse of health, has not impared it forever! How many, in how many ways, wickedly squander it, without receiving any return for this choicest of all our life possessions!

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A prime body is a richer treasure than weakly monarchs possess. Business men, speculators for a rise, know yea that a splendid physique is the finest piece of property you will ever own, while injuring it will entail on you a loss far greater than any other ever can be. This year you have added twenty thousand dollars to your coffers, but in doing so have worn in on your organism, and thereby lost more than twice twenty thousand dollars worth of *life-force*. A little animal power is more valuable than dollars can admeasure, and yet men and women treat it as they do sole leather—to be worn out by all manner of hard usage, and worth no more than old boots.

The great life art is preserving and improving a good organism, if we have one, an recuperating and reinvigorating whatever we do have, be it more or less, and should take precedence over every other life end and pleasure. Stop instantly whatever interfere with it, and do anything, everything to augment it.

Health is a fortune at interest, the income from which, economically used, will support you; but it cannot be squandered at any period through life, without being brought into final account, and shortening and enfeebling it in exact proportion. Spending foolishly draws on principal, and every draft, great and little, must be reckoned into that last settlement which every draft hastens. As the faster you draw the sooner you exhaust it; so all over-eating, over-working, loss of sleep, improper habits, (tobacco using is one) colds, and whatever injures health, (and alcohol does) is a draft on the constitution, cashed at a hundred per cent. discount, till, when your life-fund is expended, but not till then, death summons you to your final reckoning. Every abuse of health enfeebles it for life, and hastens its close.

Ho! O youth! ho all, be entreated to consider the infinite value of health, and the proportionate importance of its preservation, before you learn its worth by its impairment. Compared with it, *millions are trash*. Even all else without it is dross. Gain whatever you may by impairing it, you are an infinite loser; but lose what won you may in its preservation or restoration, you gain more than by acquiring fortunes, or even crowns, and worlds! And how mean one feels and acts when feeble!

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Sickness is costly. As a pecuniary investment, nothing pays the right way like health nor the wrong like disease, which both stops your wages, if you labor; or if in business, takes you from it and compels you to intrust it to others, always disastrous; besides creating heavy expenses for doctors, nurses, medicines, and a thousand incidentals. How many, now poor, would have been rich, if they and their families had always been well!

Sickness is painful. See that sick child. How forlorn and woe-stricken it looks! Mark rheumatic or gouty victims. Every motion is painful, and most of their sources of pleasure are converted into wormwood! Behold that wretched victim of disease lying prostrate on a sick bed! Torn from business, society, and all the enjoyment of life, and racked with pain! The boiling blood courses through his veins, swollen almost to a bursting. Hear his piteous wail — "My head, O, my head!" See those eyes rolling in agony! Open the windows of his soul, and behold his struggle for life in the midst of death, his horrid dread of which far exceeds the torturing pain of disease! Hear him pant for breath! Witness that gurgling in his throat! Behold the last agonizing struggle between life and death, and that final giving up of the ghost! What is more dreadful than sickness! What horror of horrors at all compares with that most awful scene experienced on earth, premature death! from which may God deliver us. Rather, let us all deliver *ourselves*, by preserving our health.

To argue that health is *spontaneous*, and as natural as breathing. or eating, or sleeping, is in fact, only these and other functions in their natural and vigorous action, is attempting to prove an axiom, or we see what we see. Allowed their natural play, all the organs will go on perpetually to manufacture life, health, and happiness, which, unless their flow is arrested by violated law, will flow on as freely and spontaneously to every human being as the river to its own ocean home. It breathes itself, sees itself, moves itself, sleeps itself, digests itself, thinks and feels itself, *everything itself;* and breathes, sees, thinks, feels, everything exactly *right*, whenever the proper conditions are fulfilled. Is it difficult to breathe? or to breathe right? or enough? or wholesome air?

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Rather, it is exceedingly difficult not to breathe, or breathe too little, or a noxous tobacco smoky atmosphere. Is it hard to eat? or enough? or what is healthy? Yet the converse is always difficult. These illustrations apply to every other function of the body.

Every organ is constituted to commence its normal and healthy action from the first, and perform it spontaneously through life; and that to a much greater degree than any now attain. Indeed it requires great, or else long-continued *violence*, to arrest their healthy and pleasurable functions at any time between birth and death. Hence there is no more need of our becoming sick, or of these functions being enfeebled or disordered, than of our shutting our eyes for weeks together, or refusing to breathe, or move, or preventing any other function by force. The human constitution has a power to resist disease perfectly astonishing.

How many of my readers have abused it outrageously hundreds of times, with comparative impunity; and even after they have thus broken it down, have still endured sickness and suffering till they wonder that they yet live! What would yours now have been if you had promoted instead of abusing it! How many hardships could you once endure! How much it took to break you down! None realize how much they outrage it. Every day and night, almost hour, we do something more or less detrimental to it—stay indoors too much; or remain much in heated rooms; or exercise too little; or else labor too much, or not exactly right; or sleep in close rooms; or over-eat, or eat what is injurious, or at least a diet less beneficial than some other things; or smoke too much; or overtax the mind,or perhaps exercise it too little; or sit in an unwholesome posture; or neglect the skin; or dress to warm; or take cold; or one or another of these ten thousand kindred things, more or less injurious to it which all perpetrate almost perpetually.

All this, in addition to those extreme imprudences of which almost all are frequently more or less guilty. And yet in spite of all this abuse of it, see how healthy many remain, often eighty or a hundred years! Tobacco poisons the human constitution; yet see how many consume daily often many smoke cigars and pipes for thirty, and even fifty years without destroying their health, though they greatly impair it. See what

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poisonous drugs some will swallow, and yet live! In short, Nature has done her utmost to bestow vigorous and uninterrupted health on every member of the human family, and to ward off disease and prolong life.

Behold and wonder at the physical stamina and energy provided for her, and then say whether every human being is not constituted for health. Even admitting that children often inherit disease from parents, yet the fact that parents have health sufficient to become parents, is abundant proof that their offspring, by careful observation of the health and hygenic laws, can both ward off their inherited predispositions, and enjoy excellent health to a good old age.

If you would succeed in life, *preserve health.*

If you would get rich, make *health paramount.*

If you would enjoy animal luxury, *preserve health.*

If you would acquire knowledge, *take good care of your health.*

If you would become great or good, *vigorous health is first.*

If you live to do good, preserve health, for what good could you do if sick or dead?

If you would always be "on hand" for business, pleasure, work, whatever may turn up, secure perfect health. Whatever may be your life-end or motive, make the *preservation of health your first business,* as it is your indispensable instrumentality of all else.

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REPORT—December 1st, 1915, to December 31st, 1916

LECTURES AND ATTENDANCE

December,	1915	22	15,309
January,	1916	66	79,990
February,	1916	21	18,615
March,	1916	40	52,055
April,	1916	43	59,980
May,	1916	61	71,950
June,	1916	50	68,900
July,	1916	56	59,775
August,	1916	89	105,491
September,	1915	52	49,800
October,	1916	77	53,312
November,	1916	55	54,130
December,	1916	30	21,000
13 months.		662	703,308

CIRCULARS AND PAMPHLETS DISTRIBUTED

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Orange, N. J.
East Orange, N. J.
Elizabeth, N. J.
Stamford, Conn.

LECTURES

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Nostrand Ave. M. E. Church..Brooklyn, N. Y.
Lockwood Club.....Brooklyn, N. Y.
Roumanian Young Folks' Club.....N. Y. City
Zion A. M .E. Church.....Englewood, N. J.
National Motion Picture Exhibition Assn., New York City

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Cambridge, Mass., Gray Davis Self-Starter Mfg. Co.
Roxbury, Mass., American Steam Valve Mfg. Co.
Lynn, Mass.....General Electric Co.
Long Island City, General Vehicle Co.-Brewster Auto Co.
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Brooklyn, N. Y.....Robbins Dry Dock Co.
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Auburn, N. Y.....Court House—Open Air
Rochester, N. Y.....Bosch Lomb Optical Co.
Rochester, N. Y.Stromberg Carlton Phone Co.
Rochester, N. Y.....Eastman Kodak Co., Kodak Park
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REPORT—December 1st, 1915, to December 31st, 1916

FACTORY AND SHOP LECTURES—(Cont'd)

Buffalo, N. Y.....Crosby Co.
Buffalo, N. Y..Main, Chippewa, Mohawk Sts.—Open Air
Detroit, Mich.....Packard Motor Co.
Detroit, Mich.....Northway Co.
Detroit, Mich....Burrows Adding Machine Co.
Detroit, Mich.....Cadallac Auto Co.
Detroit, Mich.....Maxwell Motor Co.
Detroit, Mich.....Studebaker Corp'n, Autos
Detroit, Mich.....Hudson Motor Co.
Detroit, Mich.....Chalmers Motor Co.
Detroit, Mich.....Timkin Axle Co.
Detroit, Mich.....Cadallac Sq.—Open Air
Detroit, Mich.....Cass and Michigan Aves.—Open Air
East Orange, N. J.....Sprague Electric Co.
East Orange, N. J....Westinghouse Lamp Co.
East Orange, N. J. Empire Cream Separator Co.
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Hoboken, N. J.....Remington Arms Co.
Harrison, N. J.....Edison Lamp Works
Harrison, N. J.....Hyatt Roller Bearing Co.
Harrison, N. J.....Worthington Pump Works
Newark, N. J.....Westinghouse Lamp Co.
Newark, N. J...Washington and Market Sts.—Open Air
Bloomfield, N. J.....International Fuse & Arms Co.
West Orange, N. J.....Edison Phonograph Co.
Stamford, Conn.....Yale & Towne Lock Co.

OPEN AIR STREET LECTURES, N. Y. CITY

149th Street and Bergen Avenue, New York
116th Street and Lenox Avenue, New York
125th Street and Seventh Avenue, New York
163d Street and Prospect Avenue, New York
165th Street and Longwood Avenue, New York
Ninth Street and Second Avenue, New York
Bowling Green, New York.
Rector Street and Broadway
Exchange Place and Broad Street
Wall and Broad Streets
Beaver and Broad Streets
Broadway and Park Place
Beekman Street and Park Row
Reade and Centre Streets
Reade Street and Broadway
Warren Street and Broadway
Park Place and Broadway
Murray Street and Broadway
Leonard Street and Broadway
Bond Street and Broadway
Waverly Place and Broadway
Union Square
Irving Place and Fourteenth Street
Madison Square and 23d Street
36th, 37th, 40th, 46th, 48th, 51st, 57th, 59th, 95th, 96th, 103d, 137th and 146th Streets and Broadway
181st Street and St. Nicholas Avenue.
207th Street and Sherman Avenue
Beverley Road and Flatbush Ave., Brooklyn
Court Street, Brooklyn

RESULTS

Girls and boys restored to their parents	11
Advice given to girls	521
Vice districts closed due to crusade and open air meetings	3
Crusades started for cleaner cities and towns	6
Converted men and women from drink	55
Boys converted from cigarette smoking and tobacco habit	826
Girls prevented from leaving home	14

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WM. MOLDOVER, Jr. Sec. DR. LOUIS KRAUSS, Pres.

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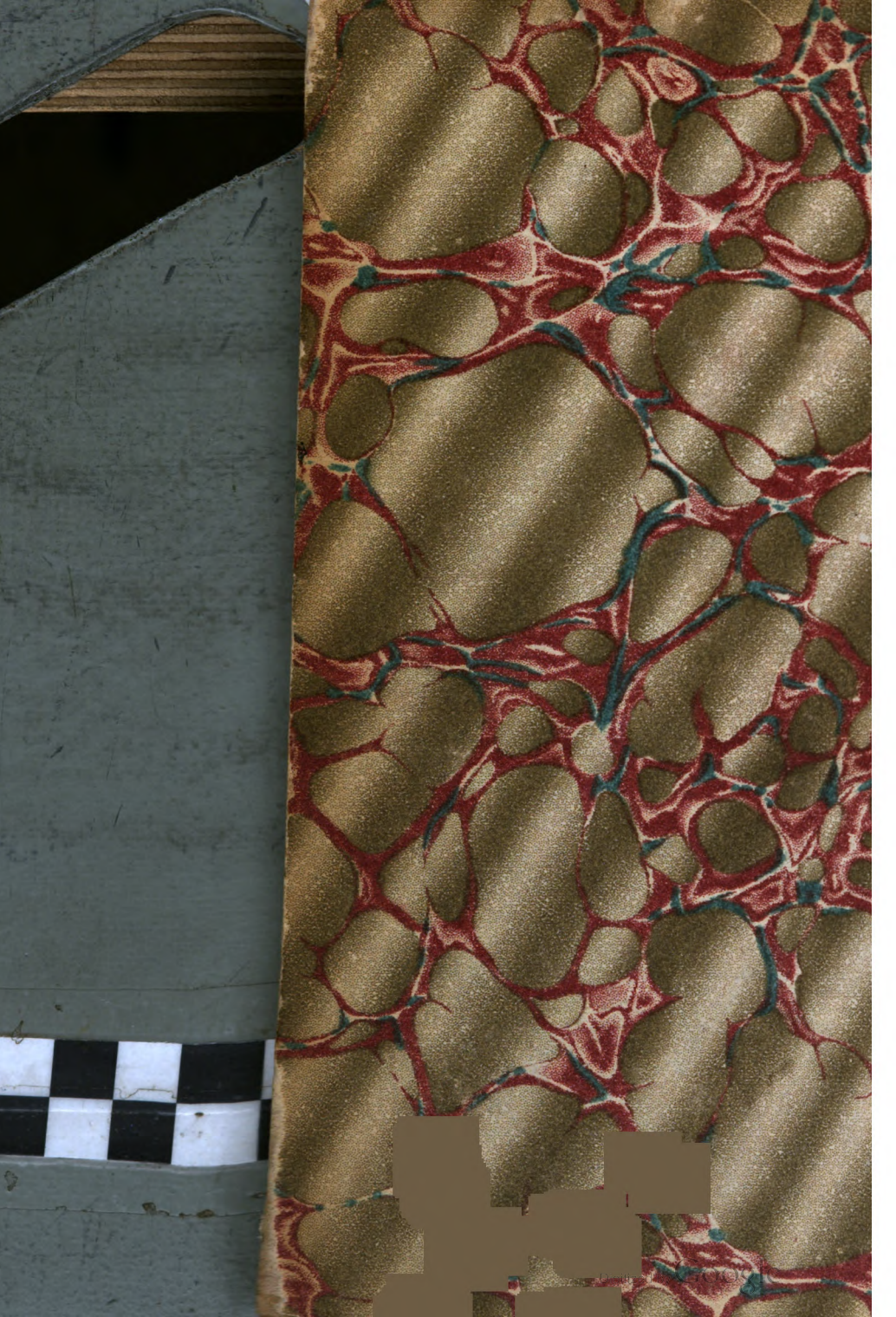
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